

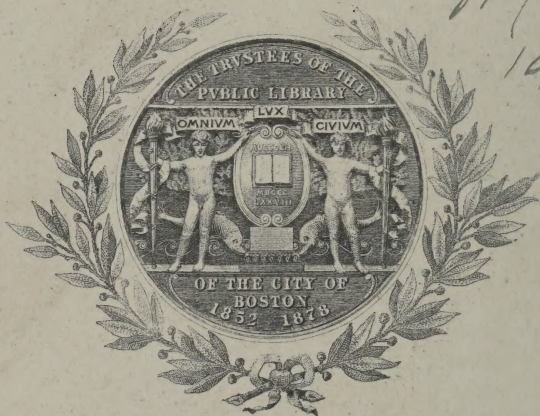
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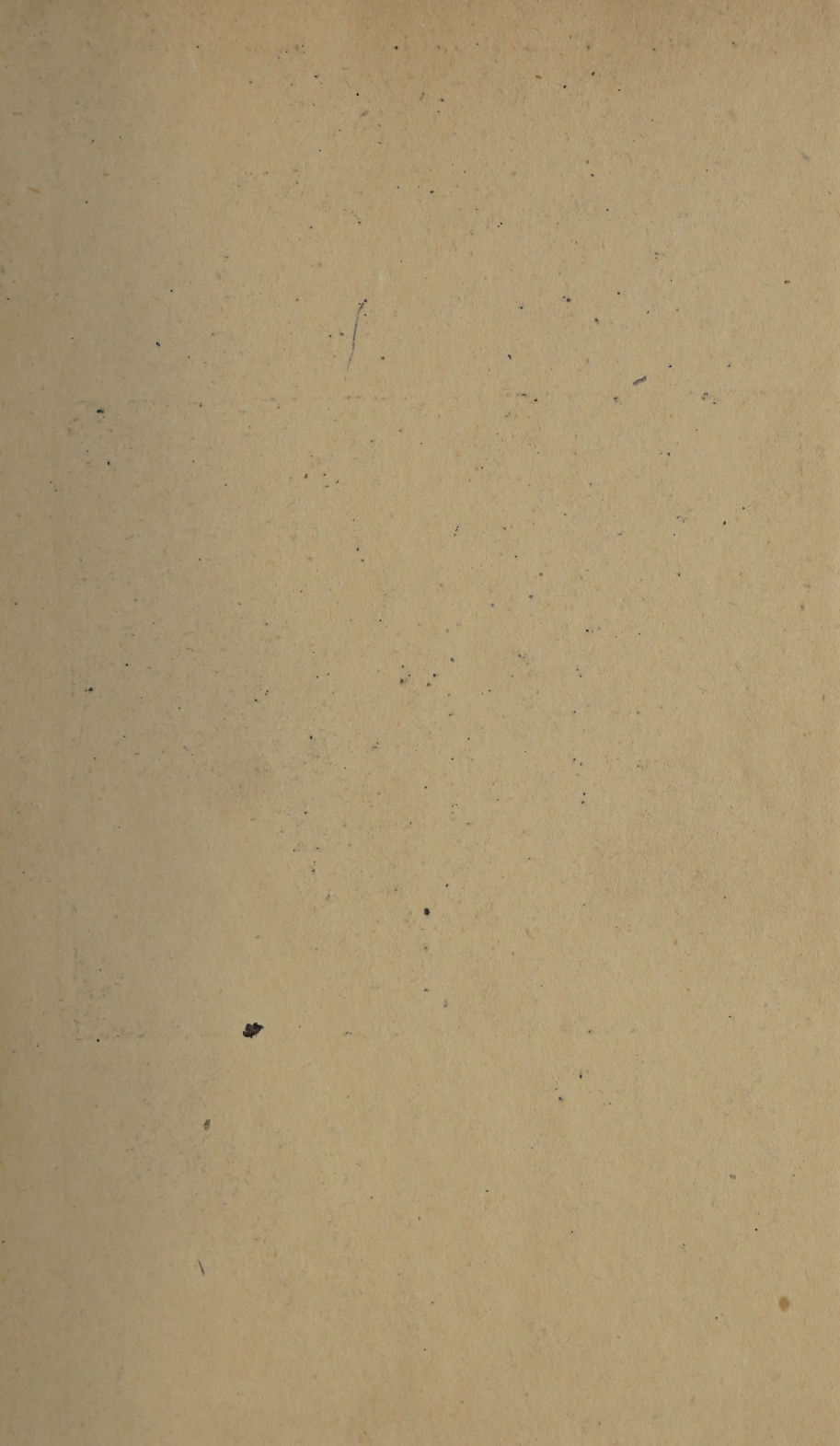


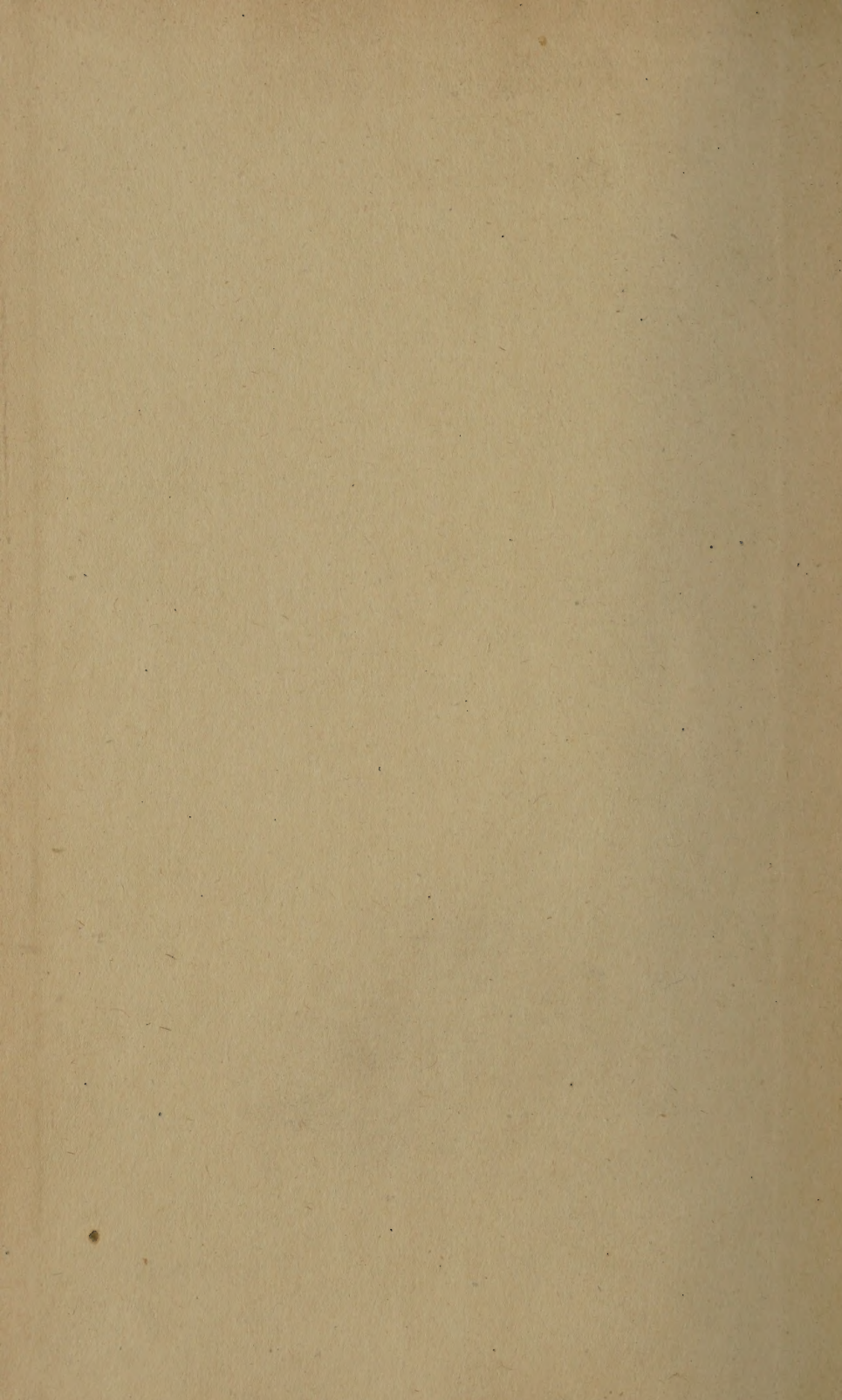
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JANUARY, 1918

MONTHLY BULLETIN

HEALTH DEPARTMENT

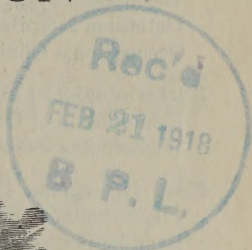
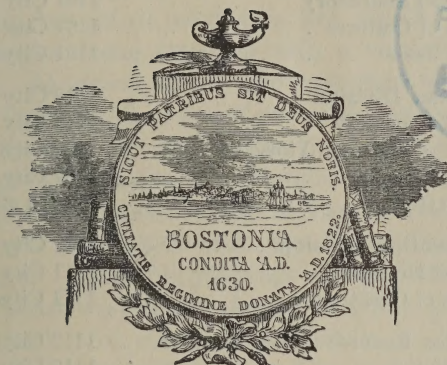
OF THE

CITY OF BOSTON

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1918



FRANCIS X. MAHONEY, M. D., *Commissioner*

STATISTICS FOR 1917.

Population 772,370			
Births 19,800	Birth rate	25.7	
Deaths 12,721	Death rate	16.34	

Of these total deaths 15 per cent were nonresidents.

BOSTON
HEALTH DEPARTMENT
CITY HALL ANNEX
1918

3619
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HEALTH DEPARTMENT.

(Tel. Fort Hill 5100.)

Commissioner of Health.

Secretary	1109 City Hall Annex.
Publications	1109 City Hall Annex.
Licenses	1109 City Hall Annex.
Medical Division	1107 City Hall Annex.
Communicable Diseases	1107 City Hall Annex.
Child Hygiene	1108 City Hall Annex.
Health Unit	17 Blossom street.
Vaccination Station	17 Blossom street.
Detention Hospital	Southampton street.
Occupational Clinic	17 Blossom street.
Bacteriological Laboratory	1101 City Hall Annex.
Examination of Cultures	1101 City Hall Annex.
Wassermann Tests	1101 City Hall Annex.
Food Inspection Division	1110 City Hall Annex.
Inspection of Foodstuffs	1110 City Hall Annex.
Examination of Milk and Vinegar	1104 City Hall Annex.
Inspection of Dairies	1102 City Hall Annex.
Brighton Abattoir	Market street, Brighton.
Sanitary Inspection Division	1111 City Hall Annex.
Abatement of Nuisances	1111 City Hall Annex.
Examination of Gasfitters	1111 City Hall Annex.
Vital Statistics Records and Accounts	1112 City Hall Annex.
Permits for Burial	1112 City Hall Annex.
Superintendent of Peddlers	27 North Grove street.

OFFICE HOURS.

The Health Department will be open from 9 a. m. to 10 p. m., except Saturdays, when the hours will be from 9 a. m. to 1 p. m. and from 5 p. m. to 10 p. m. Sundays and holidays, from 10 a. m. to 12 m. and from 5 p. m. to 10 p. m., for the reporting of cases of communicable diseases, issuing of burial permits, the distribution of antitoxins and vaccines, and the receiving of cultures and widals.

FREE WASSERMANN TESTS.

The Bacteriological Laboratory is prepared to examine blood specimens by the Wassermann test for syphilis, free of expense. Tests are made each Tuesday, Wednesday, Thursday and Friday. Blood is drawn from patients in the laboratory each Monday, Tuesday, Wednesday and Thursday from 2 to 4 p. m.

May 23-1919
10:10 AM

MONTHLY BULLETIN

OF THE

HEALTH DEPARTMENT OF THE CITY OF BOSTON.

FRANCIS X. MAHONEY, M. D., *Commissioner of Health.*

All communications relating to this publication should be addressed to Editor, BULLETIN
OF THE HEALTH DEPARTMENT, BOSTON.

VOL. 7.

BOSTON, JANUARY, 1918.

No. 1

"A dry cough is the trumpeter of death."

SOME FACTS ABOUT CEREBRO-SPINAL MENINGITIS.

Until the comparatively recent introduction of the serum treatment, cerebro-spinal meningitis was one of the deadliest of acute diseases, being attended with a mortality of nearly 80 per cent. Moreover, those who recovered were often left with mental impairment or loss of one of the special senses.

While in the past the disease was frequently confused with other diseases exhibiting some symptoms in common, recorded epidemics go back almost as far as history itself, and have especially been associated with the assembling of men in military camps. About ten years ago a succession of epidemics spread the disease over nearly the entire world, and since then it has been much more common than before.

Cerebro-spinal meningitis is caused by the so-called meningococcus or diplococcus, intracellularis meningitidis. This organism reaches the brain and nervous system from the nasopharyngeal mucous membrane, possibly by the way of the blood vessels, but more likely by the lymphatics. It is found thus in the noses and throats of persons suffering from the disease, of persons who may later develop the disease and of persons who never develop the disease. If 1,000 persons were to be collected at random from cities in this country today, probably over twenty of them would be found to be of this last-named class. The meningococcus is never to be found except in the noses and throats of human beings of the three classes above enumerated. It is a very delicate organism. After removal or expulsion from the human body it quickly dies unless transferred before being chilled to another person or to an artificially prepared warm culture medium. Close contact with a person harboring the organism is therefore

C

necessary for its transfer to the nose or throat of another human being where it may grow and multiply. Such transfer is naturally favored if the person harboring the organism has at the same time a cold or condition of the nose or throat causing coughing or sneezing. There is evidence indicating that if a person who thus gets the organisms into his own throat has also a cold, he is more likely to develop cerebro-spinal meningitis. But the great majority of persons are absolutely immune to the disease, and will not develop it, no matter under what conditions the meningococci are introduced into their noses and throats. It is this class of persons, the third class above mentioned, who harbor and cultivate the organisms and distribute them to their associates, that are the most dangerous factor in the spread of the disease to those who are susceptible to infection.

As to means of prevention of cerebro-spinal meningitis. A vaccine is made and is sold commercially which, on theoretical grounds, ought to prevent a susceptible individual from developing the disease. It has been advocated that this vaccine be combined with an anti-pneumonia vaccine and be used under certain conditions as in military camps, for example, to secure protection at the same time against both these diseases. The practical value of anti-meningitis vaccine is however difficult to establish, because while we know the great majority of persons are naturally immune we do not have, as with the Shick test for diphtheria susceptibility, the means of determining whether a given individual be susceptible to cerebro-spinal meningitis. From what has been stated, it is apparent the possibility of infection could be lessened, if not prevented, by the avoidance of close contact with other people when the disease is prevalent in any locality, particularly by keeping out of range of the breath of persons who may be coughing or sneezing. In military camps, where close contact of human beings is always unavoidable, the procedure recommended to control an outbreak of cerebro-spinal meningitis now involves the employment of a method which was developed in connection with efforts to combat serious epidemics occurring in British military camps early in the present war. A general examination is made for carriers of the meningococcus. A swab is passed into the back of the throat of each individual. The mucus thus brought away is transferred to a warm culture medium, and the resulting colonies examined for identification of the meningococcus, the chief reliance being placed on an agglutination test with a polyvalent serum. Various measures

have been tried for freeing from the meningococcus those individuals found to be carriers, but the procedure which seems to be most promising consists of spraying or irrigating the nose and throat with salt solution or with a 0.25 per cent aquerus chloranim-T solution and subsequently using four times daily a solution of dichloranin-T solution in oil.*

The use of anti-meningococcic serum, prepared from the horse and first developed at the Rockefeller Institute in 1906, has apparently served to reduce the gross mortality of cerebrospinal meningitis from about 80 per cent to about 30 per cent, besides lessening the proportion of permanent disabilities in those who recover. It is now evident that unsatisfactory results of serum treatment which at times have tended to bring this treatment more or less into disfavor have been due to several causes. The British experience early in the war showed that a good deal of the commercial serum in the market was imperfectly prepared and worthless. Even if potent, the serum must be administered promptly and systematically. Furthermore, there appears to be two general types and various strains of the meningococcus, and in order to be efficacious the anti-meningococcic serum should be derived from a horse which has been inoculated with the same type or strain which has caused the disease in the patient to be treated. It is accordingly the practice at present to prepare for general use a polyvalent serum obtained by inoculating the animals successively with all strains of meningococci obtainable from actual human cases of the disease.

THE SCHOOL CHILD.

The parents should be most careful of the health of their child and intelligently solicitous for its physical, mental and moral welfare.

To make progress in either mind or body it is essential that one harmonize with the other. In this way best results may be obtained. If the child is mentally deficient or physically defective he will become slow, careless, dull, shiftless and a liability rather than an asset to his parents and his country.

During the early life of a child the parents should watch for any defect in their children. Obstructed and difficult breathing, eruptions, sore throat, coughs, decaying teeth and other ail-

* For details of these processes, see the Journal of the American Medical Association, August 25 and September 1, 1917.

ments so evident to a mother should receive prompt correction at the hands of a physician or surgeon. A condition which produces early or unnecessary mental fatigue or physical depression without apparent cause calls for medical attention and advice.

If defective conditions are corrected in early childhood it will mean only a matter of days or weeks and with but a minimum of suffering or discomfort. If left until a child becomes older, such defects may take months or years to correct, and with much suffering and pain.

It is in the home that many conditions which after persistent effort are ameliorated or eradicated by the nurse at school are reborn — as it were — to renewed activity; it is in the home that hygienic and other errors must be corrected. In the home of some of our recent alien population there are customs and modes of living which must be combated ere we can hope for success in settling many school questions. With many children to see or not to see is the problem.

And yet the answers of some parents to arguments advanced for the use of glasses and treatment for other ailments would be laughable were it not so serious. They will tell you that eyeglasses are a luxury, are worn for style, that the child will so get used to them that it will become a habit and the eyes grow weaker; that it will interfere with the daughters' prospects of marriage.

How many children today owe their deafness to the fact that their parents considered "running ears" beneficial, that it let out the poison and cleared the blood. Again, when you acquaint a parent of a child's difficulty in hearing you may be told that "at home he hears too much."

Another mother when told of the large tonsils which interfered with the child's breathing replied: "God put them there and there they will stay." Mothers of this class can be and are being educated, but this education must proceed slowly. The kind word, an interest in the child, explanation of the effects of the condition and the benefits of treatment tend to this end. Special emphasis is to be on the fact that the removal of the defect will increase the child's future earning capacity. In the heart to heart talk lies the hope of parental coöperation these days. Child hygiene, recently styled by a leading educator as "the conservation of human power," is well beyond the experimental stage. With the united efforts of a wise government, school boards loyal to the highest ideals, well trained teachers, intelligent parents, a medical profession ever ready to coöperate with the teacher in the interest of the child, progress is assured.

THE COLD WAVE — ITS EFFECT ON HOUSING IN BOSTON.

During the recent cold wave the sanitary conditions in houses throughout the city were extremely unsatisfactory to the health officials. The cold weather extended for an unprecedented period.. And, in addition to this extreme weather condition, the coal shortage necessitated, in many homes, the keeping of only one fire, usually in the kitchen. This meant the removal of beds for the children into the kitchen in order to keep the little ones warm. Under the circumstances it was necessary that the kitchens be made use of temporarily for sleeping purposes, for it was not possible to have heat in any other room; and even this heat in the kitchen had to be kept at a minimum on account of the scarcity of coal. The result of this was that in many tenement houses the sanitary fixtures became obstructed and the water supply frozen.

This condition prevailed generally in houses occupied by people of moderate circumstances, and many of the apartment buildings which bring a substantial rental return have been rendered almost uninhabitable because of the shortage in the coal supply. Families have been obliged to give up their apartments and take rooms in hotels in order to be comfortable. The water pipes in thousands of houses were frozen, then burst, and the water supply had to be shut off. It was impossible to secure plumbers or anybody else to take care of the vast amount of work created by these conditions.

A contributing cause to the situation, and one which has been taken up a number of times in the past, is the fact that the meters installed to indicate the amount of water used had the effect of making people practice "economy" and keep the water shut off, instead of allowing it to run and thus prevent freezing. Something should be done to meet this situation. Ever since meters were installed in tenement houses this department has advocated the establishment of a rate for the winter months which would equal the maximum rate of the warmer months. An amendment to the ordinances would have to be adopted if this practice were allowed. The amount of water consumed would be about as much in both seasons. If water were allowed to run during extremely cold weather in poorly heated houses and tenements, especially at night, when it is not in frequent use and when fires have gone out, the greater percentage of this freezing up, bursting of pipes and obstruction of drains would be avoided. It is hoped that this scheme will be tried out before another winter season opens. In several

western cities the people are advised by the Health Departments to do this — that is, allow to run during the night in a small stream from the different faucets, and it is permitted at no extra cost to owners of property.

Water conditions have caused a vast amount of extra work for the Health Department, but the end appears to be in sight. Most of the defects have been taken care of, and the plumbers are now able to handle the work in a normal way.

In addition to the insanitary condition of dwelling houses, this extremely cold weather has also caused trouble in business establishments. In many instances sprinklers have burst and goods to a considerable amount have been destroyed.

INDICTMENT OF CARELESSNESS WITH THE CLINICAL THERMOMETER.

The majority of physicians employ every precaution in the use of these instruments to avoid their transmitting infection, while there are other members of the profession who neglect this important matter. Even though this latter class of physicians is small, the matter is so important routine precautions should be substituted for careless and thoughtless methods. Instances have been noted where thermometers have been returned to their cases without any effort at cleansing, which renders contamination of the case probable, even though the thermometer was subsequently disinfected. Too frequently thermometers are merely wiped with not over-clean towels, or rinsed with cold water without drying and returned to their cases, or after careful washing of the instruments they are made a source of danger by unclean hands. Under circumstances indicating intention of physicians to use unwashed thermometers upon patients, there should be determined opposition, even to the extent of offending the doctor. If the fault is not corrected, the employment of physicians observant of proper precautions should be seriously considered. The thermometer ought to be well washed with cold water before use, and after its employment the hands of the operator should be washed with soap and water, then the thermometer should be cleansed in a like manner and dried with a clean towel. Thermometers should also be immersed in alcohol or a solution of carbolic acid before being returned to their holders. No precaution can be too pronounced to eliminate the possibility of conveying infectious material by the thermometer. When physicians fail to exercise essential precautions, they are not

only a source of direct danger, but a bad example to the community in the matter of cleanliness.

ANTHRAX A DANGEROUS DISEASE.



The character of anthrax is well shown in the illustration above. This man is 54 years of age, a dock laborer engaged in handling hides and wool. The original seat of the infection can be seen in the picture as the black spot on the right side of the face below the eye. This is the malignant pustule. It began with a small pimple, and at the end of four days it caused a tremendous swelling of the whole face and right side of the neck, closing both eyes, and interfering greatly with swallowing. This man was sent to a hospital, and fortunately recovered after having received serum treatment.

During 1917, there were nineteen similar cases reported in this city, all contracted from imported hides or wool.

WEEDING OUT INCOMPETENT MEDICAL OFFICERS.

The Surgeon General of the Army has ordered that steps be taken for the elimination from the service of incompetent medical officers. In this category will be placed officers not fully qualified to perform their duties because of mental and physical incapacity, bad habits, or laziness. By the provisions of this order, effective December 14, officers assigned to duties that they cannot competently perform because of unsuitable previous training will be transferred and tried in other positions. If then unable to do satisfactory work, they will be reported to the Surgeon General as unfit and sent before a Board with a view to their discharge from service.

Recognizing that a proportion of medical officers are not fully qualified to perform their duties because of physical disability, mental incapacity, temperamental unfitness, laziness, inability to command men, lack of education or proper training, all division surgeons, commanding officers of base hospitals and other medical officers having subordinates are directed to list those whose work has not been satisfactory. If mental incapacity is suspected, psychological examinations will be given to determine the fact. Systematic instruction in military hospitals is recommended to remedy incompetency due to poor training in the technique of professional work. The medical officers' training camps are relied upon to correct deficiencies other than professional incapacity.

Medical officers who have been transferred will be given proper instruction in their new work, and will not be discharged from the service until their superiors are convinced that they cannot become competent within a reasonable time. No action for discharge will be taken until they have failed in two lines of work, viz., the professional care of the sick and disabled and medical field work, the latter including camp sanitation, handling of men, first aid and transportation of wounded.

BAD AIR.

"Experiments indicate that fresh air is needed at all times and in all places. While we have changed our ideas as to what causes bad air, ventilation is just as essential to remove the heat produced by human bodies as it was once thought to be to remove the carbon dioxide produced by human lungs, and it is now proved also to be essential for carrying away chemical products which exert a measurable effect upon the appetite for food. People who live and work in overheated and under-ventilated rooms are reducing their vitality and rendering themselves an easy prey to all sorts of diseases, such as tuberculosis, pneumonia, grippe, etc."

[C. E. A. Winslow.

REGISTRATION OF BIRTHS IN BOSTON AND ELSEWHERE.

In my report as Chairman of the Committee of the National Municipal League on Uniform Municipal Accounting and Statistics, in 1903, I had occasion to remark on the inadequacy of the registration of births in the cities of the United States as a class. The following extract from the report may serve to indicate the condition of things in 1901:

The statistics of births, even in "registration cities," are notoriously untrustworthy. Thus, if we compute for 1901 the birth and death rates of the ten largest cities of the country on the basis of the "revised estimates" of population and the number of births and deaths given in the "Statistics of Cities," Number 42 (September, 1902), of the Bulletin of the United States Department of Labor, we find that the birth rate per thousand of population was 18.99, or only 1.14 above the death rate, viz., 17.85. In other words, in an estimated population of 9,857,504, for the ten leading cities in 1901, the births, numbering 187,185, exceeded the deaths (176,000) by only 11,185. In three of the ten cities the figures given by the United States Commissioner of Labor show an excess of deaths over births for the year in question,—that excess being 1,684 for Baltimore, 2,130 for San Francisco, and 1,064 for Cincinnati, or 4,878 for the three cities. Can we wonder that unsophisticated publicists and editors raise the cry of "race-suicide"? The truth is that the registration of births in cities is so faulty that our "birth rates" are valueless in many instances. "It is doubtful," says Mr. W. A. King, Chief Statistician for Vital Statistics of the Twelfth Census of the United States, "if there is a single place in which births are registered as fully as deaths."

In 1901, the Registration Area for Deaths in the United States was not nearly as extensive or as well organized as it has since become. The death rates of certain large cities, issued by their health

departments, were frequently inaccurate, owing to the fact that they were based on over-estimates of population, such over-estimates in not a few instances being nothing but "braggart" claims. For instance, no less than three official estimates for the City of Baltimore, in 1898, were current. One gave the city 500,000 population; a second, 541,000; and a third, 625,270. But in June, 1900, the enumerators of the Twelfth Census could find only 508,967 people in Baltimore. The Health Department of Baltimore based its death rates for the years 1898, 1899 and 1900 on an estimated population of 541,000. Consequently, these rates were too low by 1.86 in 1898, 1.22 in 1899, and 1.24 in 1900. Similarly, the death rates computed by the Health Department of Cincinnati, for the three years 1897-99, were based on an estimate of population of 405,000, whereas the enumerators in 1900 found the population of the city to be 325,902. Consequently the published death rates were too low, 3.81 in 1897, 3.66 in 1898, and 3.77 in 1899.

The brag system of estimating population as a basis for computing annual death rates has happily become largely obsolete. The official estimates of the Census Bureau for July 1 of each year have doubtless exercised a corrective influence in this respect.

The extension and better organization of the Birth Registration Area is devoutly to be wished for. Indeed it may be considered a matter of prime importance in view of the fact that in estimating the man power for military purposes throughout the United States, the authorities must have fuller and more accurate knowledge as to the number of men children born in the centers of population year by year. But the state and city governments of the United States will have to radically reform their systems of Birth Registration before the military establishment can be furnished with trustworthy data.

In 1915, the Registration Area for Deaths in the United States included 67.1 per cent of the total estimated population. The corresponding per cent for 1900 was only 40.5. By 1910, it had increased to 58.3. The Birth Registration Area was first established by the Federal Census Bureau for 1915, as of July 1 of that year, when it included only 31.03 per cent of the estimated population. But the inherent difficulties of inducing indifferent and laggard cities to take adequate measures to render their birth registration efficient are much more considerable than were encountered in reforming the registration of deaths.

Vital statisticians have begun to criticize the extravagant claims made for the reduction of deaths amongst children, especially those under one year, that have been put out by enthusiastic crusaders. Dr. Louis I. Dublin, Statistician of the Metropolitan Life Insurance Company, has recently issued a timely and valuable study of "The Present Status of Birth Registration in American Cities and Its Relation to the Infant Mortality Rate." Dr. Dublin instances the claim that the infant mortality rate for Baltimore was reduced from 217.7 in 1910 to 119.8

in 1915. He notes that in 1910 the recorded birth rate was only 17.6 per thousand population, but that in 1915 it had increased to 23.3, that is, the number of births between 1910 and 1915 had increased 38.3 per cent, against an increase in total population of 4.3 per cent. He declares that if the same birth rate had obtained in 1910 as in 1915 the number of births registered should have been 13,037 instead of 9,868 as reported. Then the infant mortality rate for 1910 would have been 164.6 as against 217.7—the rate quoted. He concludes, "it must be evident that the marked decrease in mortality rates is not all clear gain and that a large amount of it is fictitious, being the result of improved municipal book-keeping."

Dr. Dublin publishes a table "Registered Births and Birth Rates Returned by 144 Cities in the United States, 1910, 1914, and 1915." The following table covering: (1) the 20 Most Populous Cities in the Country, and (2) Certain Selected Massachusetts Cities and Towns, has been compiled from Dr. Dublin's data, except that the estimated population in the first column has been supplied from other sources.

BIRTH STATISTICS, 1910 AND 1915.
I. Most Populous Cities in the Country.

CITY.	Estimated Population. July 1, 1915.	NUMBER OF BIRTHS.		BIRTH RATE PER 1,000 POPULATION.	
		1910.	1915.	1910.	1915.
1. New York*	5,468,190	129,080	141,256	26.9	25.8
2. Chicago	2,447,845	24,368	51,703	11.1	21.1
3. Philadelphia*	1,683,664	38,676	40,849	24.9	24.3
4. St. Louis	745,988	15,663	15,018	22.7	20.1
5. Boston*	745,139	17,670	19,655	25.7	26.4
6. Cleveland	657,311	?	?	?	?
7. Baltimore	584,605	9,858	13,634	17.6	23.3
8. Pittsburgh*	571,984	15,197	16,139	28.4	28.2
9. Detroit*	554,717	11,509	20,917	24.5	37.7
10. Los Angeles	475,367	5,476	7,925	16.9	16.7
11. Buffalo*	461,335	10,008	12,683	23.5	27.5
12. San Francisco	456,009	6,435	7,649	15.4	16.8
13. Milwaukee	428,062	9,797	11,278	26.1	26.3
14. Cincinnati	406,706	7,263	7,803	19.9	19.2
15. Newark	399,000	10,289	11,248	29.4	28.2
16. New Orleans	366,484	?	?	?	?
17. Washington*	358,679	7,031	7,067	21.2	19.7
18. Minneapolis	353,460	5,985	7,813	19.7	22.1
19. Seattle†	330,834	4,220	4,953	17.5	15.0
20. Jersey City	300,133	4,567	7,085	17.0	23.6

* In Registration Area.

† Possibly population is over-estimated.

BIRTH STATISTICS, 1910 AND 1915.

II. Certain Selected Massachusetts Towns and Cities.

(All in Registration Area.)

CITY.	Estimated Population. July 1, 1915.	NUMBER OF BIRTHS.		BIRTH RATE PER 1,000 POPULATION.	
		1910.	1915.	1910.	1915.
1. Adams.....	14,022	431	438	33.0	31.2
2. Attleborough.....	18,788	426	489	26.1	26.0
3. Boston.....	745,139	17,670	19,655	25.7	26.4
4. Chicopee.....	28,688	912	1,207	35.7	42.7
5. Haverhill.....	47,774	1,050	1,214	23.7	25.4
6. Lowell.....	112,124	2,650	2,964	24.9	26.4
7. Lynn.....	100,316	2,403	2,220	26.8	22.1
8. Melrose.....	17,166	312	354	19.8	20.6
9. New Bedford.....	114,694	3,973	3,673	40.8	32.0
10. Newburyport.....	15,195	321	367	21.5	24.2
11. Newton.....	43,085	826	903	20.7	21.0
12. Peabody.....	17,935	406	588	25.7	32.8
13. Quincy.....	37,251	949	1,075	28.9	28.9
14. Revere*.....	22,344	462	772	25.1	34.6
15. Salem.....	47,778	1,260	1,046	28.7	21.9
16. Springfield.....	103,216	2,656	3,375	29.7	32.7
17. Wakefield.....	12,519	276	325	24.1	26.0
18. Watertown*.....	14,546	385	500	29.7	34.4
19. Webster.....	12,936	404	362	34.9	28.0
20. Winthrop.....	12,279	181	218	17.7	17.8
21. Woburn.....	15,862	351	369	22.9	23.3
22. Worcester.....	160,523	4,060	4,691	27.7	29.2

* Possibly population is over-estimated.

Dr. Dublin applies the following simple tests of the completeness of birth registration:

I. The number of births registered in any community in a calendar year should be greater than the number of living children under 1 year old.

In 23 out of 144 cities, or 15.9 per cent of all the cities, the population under 1 year exceeded the number of births reported for the year. In all these cities the registration of births was clearly inaccurate. Among the 23 cities one finds Baltimore, Chicago, Jersey City, Nashville and Birmingham, Ala.

II. The second test of the accuracy and completeness of birth registration is the extent to which the birth rate varies from year to year.

Applying this test to the foregoing table, the differences in the birth rates for 1910 and 1915 arouse suspicion in the case of the following cities:

CITY.	BIRTH RATE.	
	1910.	1915.
Chicago.....	11.1	21.1
Baltimore.....	17.6	23.3
Detroit.....	24.5	37.7
Buffalo.....	23.5	27.5
Jersey City.....	17.0	23.6
Chicopee.....	35.7	42.7
Lynn.....	26.8	22.1
New Bedford.....	40.8	32.0
Peabody.....	25.7	32.8
Revere.....	25.1	34.6
Springfield.....	29.7	32.7
Watertown.....	29.7	34.4
Webster.....	34.9	28.0

III. The third test is found in the extent to which the birth rate of a city falls below what may be considered as the minimum normal birth rate for American cities. "It appears to me," says Dublin,

"to be entirely justifiable to doubt the accuracy of the birth rate in any but a few of our cities which is less than 20 per thousand of population."

Applying Dublin's tests to the results of registration of births in Boston, one finds a markedly favorable showing for the working of our system.

Thus it appears: that in 1910, the number of births registered in Boston, viz., 17,768, exceeded the number of living children under 1 year of age, viz., 13,570, by 4,198. Similarly in 1915, the births registered, viz., 19,931, exceeded the population under 1 year (14,780) by 5,151. In 1910, the living children under 1 year equalled 2.02 per cent of the total population, against 1.98 per cent in 1915.

The following statement of birth rates in Boston by years in the period 1910-16, which we have computed from the latest available data, yields equally favorable results, inasmuch as the fluctuation in the birth rates is very slight.

BIRTHS AND BIRTH RATES IN BOSTON, 1910-16.

YEAR.	Estimated Population as of July 1.	Births Registered in the Year.	Rate per 1,000 of Population.
1910.....	673,045	17,768	26.40
1911.....	684,811	17,844	26.06
1912.....	712,524	18,888	26.51
1913.....	724,493	19,270	26.60
1914.....	736,462	19,672	26.71
1915.....	748,431	19,931	26.63
1916.....	760,400	19,766	25.99

While Dr. Dublin holds that a birth rate of less than 20 should arouse suspicion of incomplete registration, he points out that "in some communities where the foreign born population predominates a birth rate under 25 should be accepted with question." Accordingly Boston's birth rate, 26 in round numbers, throughout the period 1910-16, should be accepted without question.

[Dr. Edward M. Hartwell.

ROTTEN-EGG DEALER FINED \$500.

On January 22 in the Superior Criminal Court, before Chief Justice Aiken, Samuel Gottfried, a dealer in liquid eggs in this city, pleaded guilty to a charge of selling rotten eggs and was fined \$500.

In the opinion of this department this episode is the closing chapter in the career of one of the most persistent food violators in this city.

In the spring of 1916 this defendant was brought to trial in the Federal Court in Boston for selling decomposed eggs, and, on a promise to discontinue the business, was given a suspended sentence. After this sentence was imposed Gottfried dissolved the American Egg Company, although he continued to use the name, stationery and other business paraphernalia of this corporation. His practice was to purchase leaky and cracked eggs and break them out into liquid form and mix them with rotten eggs. This product he sold to bakers. It was necessary for the department to prosecute him for six distinct violations before he gave up the business and moved to an adjoining city.

When the first cases of prosecution against him were brought into the lower court Gottfried tried to shield himself behind the

American Egg Company, claiming that it was a legally incorporated company. When this ruse failed he went to the State House and resurrected the American Egg Company and had it incorporated, which made it a legal corporation, and subsequent convictions were obtained against this company. The fines levied totaled \$900 but an appeal was taken on all counts. The cases have been waiting disposition in the Superior Court for almost a year and while they were pending the defendant ceased to break eggs for food in Boston.

THE IMPORTANCE OF BIRTH REGISTRATION.

The attention of physicians is called to the necessity of reporting births. The statute laws of this state require that the physician report a birth at which he has attended within 48 hours and then file a complete report of this birth within 15 days.

Of all records the birth certificate is undeniably the most valuable record, for there is hardly a phase in life from the cradle to the grave where this tiny report is not used for the establishment of some fact of value either to the person or to the community.

At no time has the value of absolutely correct birth registration been more apparent than it is at the present time; we are a nation now at war and it has often been found to be of the greatest importance to produce the birth certificates of persons either abroad or at home to prove their citizenship. Also, competent proof of birth may be necessary for a man to prove whether or not he is liable for military service.

Many well informed public men are of the opinion that we will have an era of compulsory military training for all males; then it will be of the greatest importance both to the country and the individual that all births be properly registered.

A birth certificate may be needed to prove legitimacy or right to inherit property. It is also called for in order to obtain admission to school and to establish right to go to work. It serves to establish right to vote and hold public office, to marry, to obtain pensions and the settlement of insurance. Further concrete examples might also be cited to show the importance and care of birth registration.

STATISTICAL SUMMARY, 1917.

Area of the city, 47.34 square miles, or 30,295 acres.	
Population (census, April 1, 1915)	745,439
Population (estimated July 1, 1916) *	772,370
Births (stillbirths not included)	19,840
Birth rate per 1,000 inhabitants	25.69
Deaths (stillbirths not included)	12,721
Death rate per 1,000 inhabitants	16.47
Death rate of children under one year per 1,000 births	99.04
Death rate from pulmonary tuberculosis per 1,000 inhabitants	1.49

* Estimated by the arithmetical method, using the censuses of 1910 and 1915.

Summary of Rates.

Birth and Death Rates per 1,000 Population.

	1901-05.	1906-10.	1911-15.	1913.	1914.	1915.	1916.	1917.
Births (excluding stillborns).....	27.52	27.81	26.45	26.17	25.92	26.36	25.97	25.69
Deaths (excluding stillborns).....	18.75	17.88	16.39	16.34	16.06	16.06	16.78	16.47
Smallpox.....	.095	.0003	.0003					
Measles.....	.124	.127	.101	.106	.084	.053	.141	.131
Scarlet fever.....	.153	.104	.091	.106	.088	.106	.051	.060
Diphtheria and croup.....	.387	.265	.213	.215	.229	.291	.243	.357
Whooping cough.....	.124	.113	.121	.134	.062	.148	.097	.057
Typhoid fever.....	.224	.160	.079	.083	.090	.053	.034	.028
Diarrhea and enteritis (under two years).....	.979	.910	.761	.725	.652	.605		.527
Diarrhea and enteritis (all ages).....	1.112	1.060	.866	.832	.745	.711		.653
Pulmonary tuberculosis.....	2.168	1.757	1.470	1.469	1.419	1.382	1.462	1.495
Deaths under one year per 1,000 births (excluding stillborns).....	138.41	133.40	111.07	109.69	103.12	103.68	104.05	99.04

REPORT OF THE HEALTH UNIT FOR THE MONTH OF JANUARY, 1918.

Health Department.

Visits made by medical inspector:

Contagious	93
Tuberculosis	1
Ophthalmia	15
Miscellaneous	36
Total	<u>145</u>

Cases visited by nurses:

Medical	350
Babies	75
Total	<u>425</u>

Defective sanitary conditions found in tenement houses,	6
Calls by district physician from Boston Dispensary .	341

Instructive District Nursing Association.

Visits made by nurses	864
---------------------------------	-----

Baby Hygiene Association.

Total number of babies cared for	155
New babies admitted	12
Conferences held	4
Total conference attendance	143
Home visits by nurses	418
Babies readmitted	1

Associated and Hebrew Federated Charities.

Cases investigated and assisted	2
---	---

Consumptives' Hospital Department.

Calls by nurses in district	725
---------------------------------------	-----

SUMMARY OF VITAL STATISTICS.

There were 1,265 deaths reported in the month ending January 31, against 1,365 in the corresponding period last year, a death rate of 18.99 against 20.81.

Reported deaths of nonresidents numbered 166, against 178 last year.

Of deaths from reportable diseases the principal increases were:

Diphtheria	13
Measles	10
Pulmonary tuberculosis	7
Whooping cough	9
Scarlet fever	6

Other important differences were:

Decreases:

Heart disease and nephritis	74
Pneumonia	31
Influenza	9
Other causes	42

The principal increases were:

Bronchitis	6
----------------------	---

There were 24 more deaths under 1 year, 40 more under 5 years, and 84 less over 60 years.

NUMBER OF CASES AND DEATHS FROM COMMUNICABLE DISEASES FOR JANUARY.

	CASES.			DEATHS.		
	1918.		1917.	1918.		1917.
	Total.	Non-Resident.	Total.	Total.	Non-Resident.	Total.
Diphtheria	430	50	291	37	12	25
Scarlet fever	173	28	148	7	1	1
Measles	510	2	367	12	1	2
Typhoid fever	3		7	2	1	2
Whooping cough	290		18	11		2
Pulmonary tuberculosis	212	16	209	108	6	101

MORTALITY FOR JANUARY AND CORRESPONDING MONTH IN 1917.

	1918.	1917
Total deaths	1,265	1,365
Nonresidents	166	178
Rate	18.99	20.81
Corrected rate (nonresidents deducted)	16.50	18.10
Deaths under 1 year	191	167
Deaths under 2 years	247	208
Deaths under 5 years	295	255
Deaths over 60 years	418	502

CAUSES OF DEATH.

	Totals, 1918.	Non- residents, 1918.	Totals, 1917.
Anterior poliomyelitis	1	—	3
Cerebro-spinal meningitis	4	1	6
Diphtheria	38	13	25
Malaria	—	—	—
Measles	12	1	2
Scarlet fever	7	1	1
Tetanus	—	—	—
Tuberculosis (pulmonary)	108	6	101
Tuberculosis (other forms)	15	6	15
Typhoid fever	3	1	2
Whooping cough	11	—	2
Septic sore throat	—	—	—
Accidental and violent	104	18	100
Heart disease, endocarditis, pericarditis and nephritis,	200	13	274
Bronchitis	21	4	15
Cancer	83	15	83
Diarrhea and enteritis (under 2 years)	9	4	10
Diarrhea and enteritis (2 years and over)	6	2	2
Erysipelas	7	—	6
Meningitis and encephalitis	3	1	3
Old age	2	—	3
Pneumonia	228	10	259
Premature birth	41	6	41
Puerperal diseases	22	1	20
Rheumatism	1	1	1
Syphilis	6	1	7
Influenza	4	1	13
Other causes	329	54	371

**The Following is a Summary of the Work Done by the
Different Divisions in the Department for January,
1918.**

CENTRAL DIVISION.

Prosecutions authorized	15
Stable hearings	2
Temporary stable permit	1
Premises ordered vacated	5
Miscellaneous orders	4
Applications lying-in hospitals approved	2
Forcible removals ordered	2
Proposal	1
Appointments	3
Conferences	2
Leave of absence granted	1

Licenses — Permits.

Transfers	2
Hearings	2
Special permit	1
Grease (licenses to remove renewed)	74
Licenses to peddle fruit and vegetables	13
Manicure — Massage	10
Hen permits	7
Numbers assigned	20
Stable permit granted (provisional)	1
Stable permit granted	1
Stable license issued	1
Sundry licenses	3
Dump permits	4
Applications for peddlers' licenses approved	367
Vehicles inspected and approved	412
Milk licenses	88
Offensive trade licensed	1

MEDICAL DIVISION.

Communicable Diseases.

Number of visits by medical inspectors	1,032
Antitoxin given	20
Deaths investigated	26
Cases brought to Boston for treatment	65
Vaccinations	81
Vaccination certificates	44
Forcible removals recommended	3

Public Health Nursing.

Tuberculosis visits	502
Communicable disease visits	2,864
Number of revisits (infants)	3,420
Number of new babies visited	374
Total visits by nurses	<u>7,160</u>

BACTERIOLOGICAL LABORATORY.

Examinations for Diagnosis and Release.

Diphtheria	2,227
Tuberculosis	404
Typhoid	59
Gonorrhea	511
Gonorrheal ophthalmia	36
Syphilis	647
T. B. Comp. Fix. Test (special examinations)	647
Other examinations *	76
Bacteriological milk examinations	720

* Examination of rats, 53; Genito-Urinary Tuberculosis, 4; Malaria, 4; Paratyphoid, 2; Anthrax, 2; K. L. Virulence, 6; spinal fluid, 1; oats, 1; adhesive plaster, 2; gauze, 1.

FOOD INSPECTION.

Live Stock Inspected at Brighton Abattoir.

Cattle inspected	565
Calves inspected	3,718
Swine inspected	3,062
Animals condemned, whole	3
Parts condemned	234
Stores inspected	1,659
Court cases	6
Fines	\$872 50

MILK INSPECTION.

(Examinations as to Statute Requirements.)

Samples examined:

Chemical examinations of milk	1,431
Bacteriological examinations of milk	720
Chemical examinations of vinegar	70
Chemical examinations of butter and cheese	87
Chemical examinations of ice cream	9
Miscellaneous examinations	8
Number of court cases	50
Fines	\$955

Inspection of Provisions — Articles Condemned.

Meat and Fish:

Pork shoulder	17 pounds
Turkey	50 pounds
Beef	810 pounds
Poultry	123 pounds
Ham	5 pounds
Pig's head	13 pounds
Liver	10 pounds
Scallops	25 gallons
Cod	6 pounds
Haddock	31 pounds

Miscellaneous:

Apricots	10 pounds
Cheese	200 pounds
Eggs	313 dozen
Oranges	7 dozen
Carrots	4 bushels
Squash	50 pounds
Turnips	40 pounds
Cabbage	3,610 pounds
Sweet potatoes	7,560 pounds
Chestnuts	1,611 pounds
Sugar	3 pounds

SANITARY INSPECTION.

New reports	3,923
New tenement house reports	142
Legal notices recommended	535
Reinspections	5,934
Nuisances reported	4,621
Complaints investigated	658
Number of court cases	3

MONTHLY METEOROLOGICAL SUMMARY, JANUARY.

ATMOSPHERIC PRESSURE.

(Reduced to sea level; inches and hundredths.)

Mean, 29.82; highest, 30.53; date, 28; lowest, 28.68; date, 15.

TEMPERATURE.

Highest, 54; date, 12; lowest, —3; date, 1; greatest daily range, 26; date, 12; least daily range, 5; date, 28; normal for month, 27.0°.

PRECIPITATION.

Total this month, 3.11; snowfall, 13.8; greatest precipitation in 24 hours, 0.86; date, 12, 15; snow on the ground at end of month, normal for this month, 4.6.

WIND.

Prevailing direction, west; total movement, 8,955 miles; average hourly velocity, 12.0; maximum velocity (for five minutes), 38 miles per hour from east, on 12th.

WEATHER.

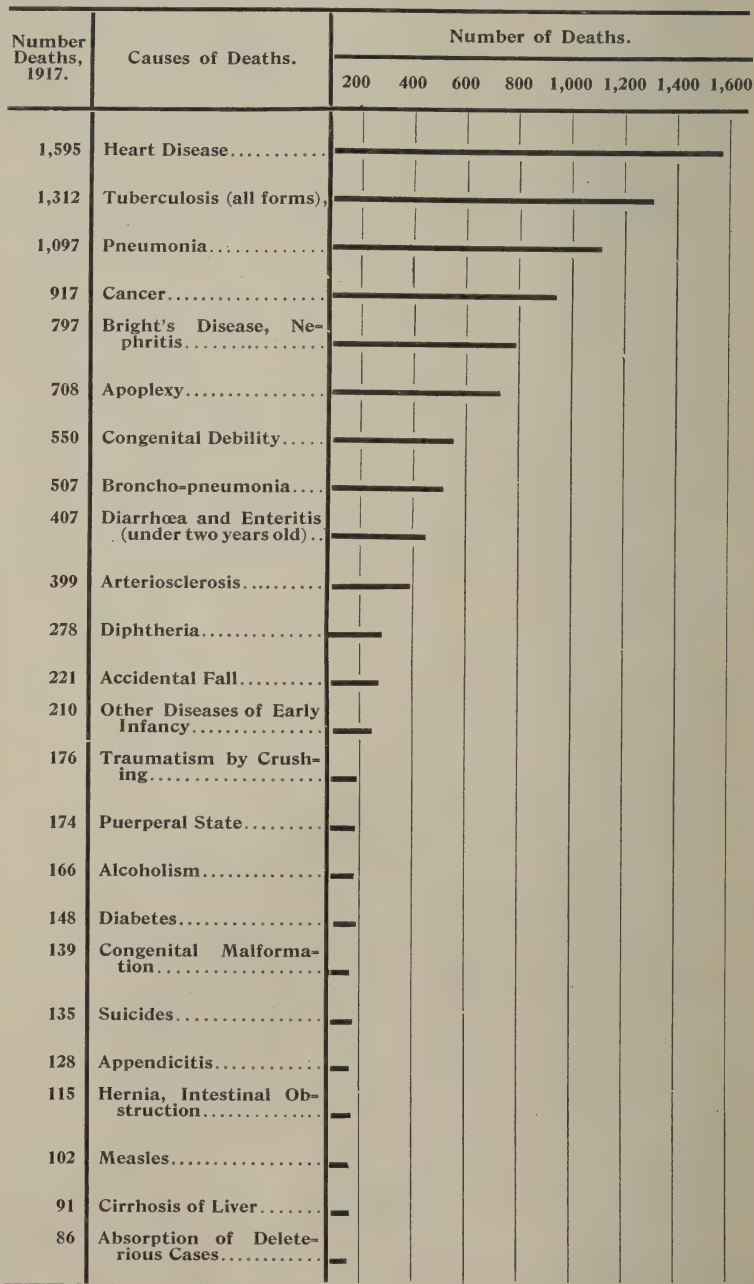
Number of days clear, 11; partly cloudy, 8; cloudy, 12; on which .01 inch or more of precipitation occurred, 11.

MISCELLANEOUS PHENOMENA (Dates of).

Auroras, 0; halos: solar, 2, 13, 24, 26, 30; lunar, 26, 27; hail, 0; sleet, 7, 15; fog, 0; thunder storm, 0; frost: light, —; heavy, —; killing, —.

SHORTEN THESE LINES.

This chart shows the twenty-four principal causes of death in Boston during the year 1917. The Health Department is trying to shorten "these lines." It cannot do much without public coöperation. What are you doing to help?



FEBRUARY, 1918

MONTHLY BULLETIN
HEALTH DEPARTMENT
OF THE
CITY OF BOSTON



FRANCIS X. MAHONEY, M. D., *Commissioner*

STATISTICS FOR 1917.

Population	772,370		
Births	19,856	Birth rate	25.7
Deaths	12,721	Death rate	16.47

Of these total deaths 15 per cent were nonresidents.

BOSTON
HEALTH DEPARTMENT
CITY HALL ANNEX
1918

HEALTH DEPARTMENT.

(Tel. Fort Hill 5100.)

Commissioner of Health.

Secretary	1109 City Hall Annex.
Publications	1109 City Hall Annex.
Licenses	1109 City Hall Annex.
Medical Division	1107 City Hall Annex.
Communicable Diseases	1107 City Hall Annex.
Child Hygiene	1108 City Hall Annex.
Health Unit	17 Blossom street.
Vaccination Station	17 Blossom street.
Detention Hospital	Southampton street.
Occupational Clinic	17 Blossom street.
Bacteriological Laboratory	1101 City Hall Annex.
Examination of Cultures	1101 City Hall Annex.
Wassermann Tests	1101 City Hall Annex.
Food Inspection Division	1110 City Hall Annex.
Inspection of Foodstuffs	1110 City Hall Annex.
Examination of Milk and Vinegar	1104 City Hall Annex.
Inspection of Dairies	1102 City Hall Annex.
Brighton Abattoir	Market street, Brighton.
Sanitary Inspection Division	1111 City Hall Annex.
Abatement of Nuisances	1111 City Hall Annex.
Examination of Gasfitters	1111 City Hall Annex.
Vital Statistics Records and Accounts	1112 City Hall Annex.
Permits for Burial	1112 City Hall Annex.
Superintendent of Peddlers	27 North Grove street.

OFFICE HOURS.

The Health Department will be open from 9 a. m. to 10 p. m., except Saturdays, when the hours will be from 9 a. m. to 1 p. m. and from 5 p. m. to 10 p. m. Sundays and holidays, from 10 a. m. to 12 m. and from 5 p. m. to 10 p. m., for the reporting of cases of communicable diseases, issuing of burial permits, the distribution of antitoxins and vaccines, and the receiving of cultures and widals.

FREE WASSERMANN TESTS.

The Bacteriological Laboratory is prepared to examine blood specimens by the Wassermann test for syphilis free of expense. Tests are made each Tuesday, Wednesday, Thursday and Friday. Blood is drawn from patients in the laboratory each Monday, Tuesday, Wednesday and Thursday from 2 to 4 p. m.

MONTHLY BULLETIN

OF THE

HEALTH DEPARTMENT OF THE CITY OF BOSTON.

FRANCIS X. MAHONEY, M. D., *Commissioner of Health.*

All communications relating to this publication should be addressed to Editor, BULLETIN
OF THE HEALTH DEPARTMENT, BOSTON.

VOL. 7.

BOSTON, FEBRUARY, 1918.

No. 2

Health is the hub on which our daily lives revolve.

THE PRESENT SMALLPOX SITUATION.

Smallpox has been very prevalent in the United States this season. The number of cases actually reported from October 1 until January 20 is shown in the totals below. Comparatively few cases have been discovered thus far in Massachusetts, but a widespread epidemic has prevailed in Maine.

In November there was reported from another state a case of smallpox which must have been contracted in Boston or the vicinity. An immediate effort was made to discover the source of infection here, but proved unsuccessful. Early in December, within a few days, several cases of the disease were discovered in Boston. They occurred in well-to-do individuals, and exposed a large number of people to the danger of infection before the nature of the disease was recognized. Every agency at the command of this department was promptly employed to locate exposed persons, vaccinate them, and keep them under observation, but it was impossible to locate them all. Investigation showed that all these cases had traveled extensively about the city while in a contagious stage of the disease, and had exposed other persons to infection in street cars, restaurants and barber shops. Investigation also showed that these cases of smallpox must have been contracted here in Boston or vicinity from other cases of smallpox which were never discovered or located. Since the occurrence of the cases above referred to, a few more cases of smallpox have been discovered in this vicinity, of which all but one is attributable to infection from undiscovered local cases. The one exception occurred in an individual whom this department was keeping under

observation after known exposure to another case. This case, which was taken to the hospital on January 23, is the last case to be discovered in the city.*

It has been, and will continue to be, the policy of this department to give the public all the information in its possession relative to local danger from smallpox. Persons who have not been vaccinated within seven years have been advised to be vaccinated.

The response to this policy has been encouraging. Over 50,000 people have been vaccinated. They have included especially the class of people among whom cases of smallpox were occurring, the well-to-do, those whose business takes them in other states, and those whose occupations bring them into close contact with persons coming into the city from elsewhere, employees of transportation companies, hotels, department stores and other large corporations. Whether or not this action has prevented an epidemic of smallpox here this winter cannot, of course, be positively stated, but one thing is certain, there are now a very large number of people in this city who, by reason of recent successful vaccination, need not care how much smallpox there may be in this city or anywhere else where they may go, for several years at least.

Another result is that physicians and others have been on the watch for symptoms of smallpox, and actual cases of the disease have been promptly recognized where otherwise the nature of disease might not have been recognized early, if at all.

Boston has escaped a troublesome outbreak of smallpox this winter. The chances of a serious epidemic are now greatly lessened, but the danger is by no means passed. Two months ago the smallpox situation in Maine constituted a serious menace to this city. Through the energetic efforts of the health authorities in that state, the disease is now well under control, but cases of smallpox are still occurring in localities in New England States from which persons are coming to Boston every day. The recent occurrence in an educational institution in this vicinity of a case of smallpox in a young woman who came down with the disease after spending her vacation in the Middle West shows that the present widespread prevalence of smallpox in other parts of the country constitutes a danger to Boston that is not to be disregarded.

Everyone familiar with conditions in Boston knows that the city is ripe for a serious smallpox epidemic, even though it may

* Since the above was written another case was discovered in Boston. The patient contracted the disease in New Hampshire.

be escaped this year. Boston has an unusually large unvaccinated population. The last outbreak occurred in 1901-02 when there were 1,528 cases reported, with 190 deaths. Whether Boston is going to see a repetition of one of these epidemics will depend upon the people themselves, upon the extent of their willingness as individuals to adopt well-recognized measures for personal self-protection. The vigilance and activity of a health department alone cannot prevent an epidemic of smallpox.

Cases of Smallpox Officially Reported in States from October 1, 1917, to January 20, 1918.

Ohio	2,755	Louisiana	157
Nebraska	1,974	Pennsylvania	137
Indiana	1,722	Virginia	125
Michigan	1,672	North Carolina	122
Kansas	1,370	Washington	111
Iowa	1,140	Maryland	79
Minnesota	878	California	47
Montana	647	South Carolina	45
Wisconsin	609	Idaho	39
Texas	558	Arizona	23
Maine	511	Wyoming	20
Mississippi	442	Oregon	16
Tennessee	350	Florida	14
West Virginia	343	Massachusetts	12
Alabama	325	Vermont	9
New York	299	Connecticut	6
Colorado	234	Nevada	2
North Dakota	169		

CHILD WELFARE.

The great war has made baby welfare nationally important. To the individual it was always important — it has become important now to the nation. The tremendous loss in killed, wounded and permanently maimed which has been sustained by European nations is appalling. This great loss must be repaired. Men must be replaced, for the nations of the world, if they are to survive, need able-bodied men.

The nations of Europe, which are at the present time most afflicted, have seen the necessity of immediate action and are redoubling their energy in the way of intensive work in baby

saving. It is time that this nation, which may in its turn be similarly afflicted, should meet the issue in the same way. If we are to expect results in the future, we must plan now. Baby saving must be planned on a scale greater than ever before and measures must be formulated whereby the loss annually in infants shall be reduced.

The young men of the nation are now in the service. We cannot afford to lose them and at the same time continue our needless losses of babies at home. In our patriotic fervor to our soldiers let us not forget the babies. We are also laboring under the handicap of reduced professional assistance due to the absence abroad of physicians and nurses who are in the service of the Government.

The large number of men in the draft found upon physical examination to be physically defective is a fair indication of neglected baby hygiene in the past, the percentage of rejections on physical grounds being 23.7 per cent. In the Civil War the percentage was even higher, 31.7 per cent.

Physical defects may be readily corrected when found in the baby which in life later would be irremediable. Whether a child shall grow up strong and robust or become a weakling is often determined in its early infancy. Let us do our bit now with the result that in the coming generation the percentage of defectives will be greatly reduced.

"There is nothing in all the world so important as little children; nothing so interesting. If ever you wish to go in for philanthropy, if ever you wish to be of any use in the world, do something for little children. If ever you yearn to be truly wise, study children. We can dress the sore, bandage the wound, imprison the criminal, heal the sick and bury the dead, but there is always a chance that we can save the child. If the great army of philanthropists ever exterminate sin and pestilence, ever work out the race's salvation, it will be because a little child has led them."

PREMISES NEED CLEANING NOW.

The past winter has been a severe one, particularly on those living at home. Conditions in apartments and tenements have been extremely trying as the result of cold, ice and snow. Water pipes have frozen, gas pressure has been deficient, garbage has been frozen, barrels frozen hard and fast, collections have been difficult, there have been leaks and floods, and conditions generally have been unpleasant. Cellars and yards have been made to serve as storage places for all sorts of filth and rubbish, and water-closets have been filthy and offensive.

The situation has been further distressful because of the difficulty of securing men to repair leaks, thaw pipes, collect rubbish and clean up premises.

The weather is now milder and a thaw has set in. It is expected that efforts will be made on the part of the tenants and owners to put their premises and property in a satisfactory condition forthwith. To clean out filth and rubbish, and to give their homes a good sunning and airing, should be the duty of every owner and tenant.

The Health Department does not propose to allow many days or weeks of grace in which to have premises placed in a sanitary condition. There need be no wait for any "clean-up" period. The present is the time to rid premises of unclean material and, for the good of all, the work must begin now. There are laws and ordinances which compel this, and the Health Department has no choice in the matter but to see that these laws are complied with. Premises must be put in a habitable and sanitary condition. This work may be done to great advantage to all now, if we but see the wisdom of this course and pursue it.

FAKE OLIVE OIL.

Information furnished by the Federal Bureau of Chemistry was instrumental in the seizure by inspectors of the Health Department of several hundred gallons of alleged olive oil. All the cans bore attractive labels, marked "Guaranteed purest olive oil," and also stated the medicinal value of the oil. Upon examination it was found that they contained from 83 to 95 per cent cottonseed oil and in one instance no olive oil whatsoever was found. The cans were also all under weight.

It was later found that agents of New York importing houses have distributed throughout Boston and nearby towns great quantities of this adulterated product. The price received was \$2.75 per gallon, whereas the price for pure olive oil is \$4.50 to \$5 per gallon. Cottonseed oil is worth from \$2 to \$2.25 per gallon. At this rate the margin of profit was very satisfactory.

This investigation was done in coöperation with the Federal authorities, and as they will endeavor to prove conspiracy the violators will be turned over to the Federal Government for prosecution.

Of the 3,000,000 young men examined in the draft examinations, 730,000 were rejected for physical reasons.

SKIMMED MILK, "MILK."

Two bills, Senate No. 226 and House No. 814, should receive serious consideration at the hands of milk consumers. One of these measures essentially permits the sale of milk under a guaranty as to its butter fat content, but allows traffic in milk containing less than the low percentage of fat now established by law. One redeeming feature of this bill is that packages must bear a label on which the fat content of the product is stated, and if the percentage is less than that claimed court proceedings may follow. The other bill, House No. 814, was introduced by the president of a milk dealers' association, and requires that milk shall conform to the present standards for milk solids and fat, but the measure is intended to permit the dilution of high-grade milk with skimmed milk, as well as the manufacture of "milk" from skimmed milk and cream. A portion of the bill dealing with this phase reads as follows:

"Nothing contained in this section, however, shall be construed to prohibit the sale of milk or cream which has been standardized by the mixing of whole milk or cream with milk from which the cream or a portion thereof has been removed."

By this bill no information would be given purchasers that the product contained skimmed milk or that it was prepared from skimmed milk and cream. Naturally dealers desire to conceal this fact from the public. Furthermore there is no provision requiring that the amount of fat be stated. The past attitude of this department has been that of encouragement of the use of skimmed milk for culinary purposes, but despite the publicity given the food value of this substance, the community has failed to use it to an appreciable extent. That being the fact, there can be no doubt that if the public refuses to buy skimmed milk as such, its sale as "milk" would be doubly objectionable. The department feels that these measures should be defeated, as they seek to legalize a fraud, and that they are in the interest of the dealer, and would be used commercially to the disadvantage of consumers.

On April 1 and 2, and on subsequent dates to be announced at that time, an examination will be held for the purpose of establishing an eligible list of appointments to positions as State District Health Officers and Epidemiologist of the Massachusetts State Department of Health. Information on this matter may be had by communicating with the State Commissioner of Health, State House, Boston.

DESTRUCTION OF PERISHABLE FOOD PRODUCTS.

The Bureau of Chemistry, United States Department of Agriculture, has recently called to the attention of the State and Municipal Food and Drug and Health Officials of the Eastern District section 4 of the Food Law, regarding the willful destruction of perishable food products, such as fruit and vegetables. Under this section it is

. . . made unlawful for any person willfully to destroy any necessities for the purpose of enhancing the price or restricting the supply thereof; knowingly to commit waste or willfully to permit preventable deterioration of any necessities in or in connection with their production, manufacture, or distribution.

These officials were requested to coöperate by reporting any cases of such destruction which might come to their notice. They were asked to report such instances directly to the Chief of the Bureau of Chemistry for transmission to the Food Administration, except when immediate attention appears to be necessary, when they should make report directly to the State Food Administrator, duplicate reports at the same time being forwarded to the Chief of the Bureau of Chemistry at Washington. The time element is most important and the proper officials should be notified immediately by a preliminary report which need not contain complete details, as it is expected that the Food Administration will later request specific information in such cases as they may desire.

A FACTOR IN THE INCREASED COST OF MILK.

Many milk users are protesting at the cost of this product, but how many of these critics give consideration to the fact that one reason for the present price of milk is that there is a considerable and unnecessary loss in the conduct of business, for which the community is taxed, from the nonreturn of bottles and other milk containers to dealers? Furthermore, do all of those who deem the present milk charge excessive use care in promptly returning to dealers the bottles in which they purchase this food? If not, their complaints are to a degree of a situation created by themselves. Probably through previous agitation of this subject, more bottles were returned to milkmen in 1917 than in 1916, but despite this fact a total of 321,342 bottles were collected at the city dumps last year. This amounts to 880 bottles daily. These containers were first thrown into ash barrels by thriftless householders, and were later carted to the dumps with ashes and other like material. In addition to the

financial loss involved, it is not overpleasant to think of containers of an important and delicate foodstuff such as milk undergoing this usage. These bottles are now collected, washed and returned to dealers by an agency known as the Milk Package Exchange. Milkmen pay the latter for this service. This outlay is charged by milkmen to consumers, and is a factor in the present price of milk. To prevent this situation, return all milk containers promptly to their owners and do not retain them in households or elsewhere. Their use as containers for substances other than milk, or fluid milk products, or suitable cleansing agents, is in violation of a state law and also of a regulation of the Health Department.

BOSTON'S BABY DEATH RATE.

There are many cities and countries that have a lower infant mortality rate than Boston. It has been the aim of those interested in baby saving to reduce the rate here below 100. Now that this object has been attained we are looking to the lessons to be learned from cities and countries which show one half this rate.

The number of deaths of children under one year in this city last year was 98.91, a great decrease over 1917, and as a matter of fact the lowest number of actual deaths since 1882. When statistics on infant deaths were first compiled in 1872 in Boston the rate was 230.

Even though 1917 showed a reduction that is gratifying we must try to reach a lower figure. It is only fair to us, however, to make comparison. The number of deaths of nonresident infants in Boston was 356, or almost 19 per cent, and if these were deducted Boston's rate would be 80.98.

Let us look at the figures of New York. The number of deaths under one year was 12,568 and the number of nonresidents but 180 or 1.4 per cent. In Detroit in 1917, 3,722 infants died under one year of age and of this number the nonresidents were only 31, equal to 1.2 per cent. Of Baltimore, total of 1,783 deaths under one year only 34, or 8 per cent, were nonresidents. In large cities the nonresident deaths of infants are so few that exception is not taken because they make no appreciable difference in the rate. One per cent is but little when compared to almost 20 per cent. This large number is drawn from cities and towns outside of Boston and from all parts of New England, and although they constitute one fifth of the total they are all credited to Boston and figured in its infant rate.

INFANT DEATHS IN BOSTON LAST YEAR.

One thousand nine hundred sixty-four infants under one year of age died in this city in 1917; 42 per cent were under one month and 15 per cent under twenty-four hours old.

Number of Deaths from Twenty-four Hours Old to One Month, with Leading Causes.

UNDER TWENTY-FOUR HOURS OLD, 286.

Prematurity	175	Syphilis	5
Congenital malformation	23	Other causes peculiar to early	
Congenital debility	8	infancy	32
Injuries at birth	43		

TWENTY-FOUR HOURS TO FORTY-EIGHT HOURS, 81.

Prematurity	46	Congenital malformation	14
Injuries at birth	9	All others	10
Congenital debility	2		

FORTY-EIGHT HOURS TO ONE WEEK, 209.

Prematurity	64	Syphilis	3
Congenital debility	16	Other causes peculiar to early	
Congenital malformation	36	infancy	54
Injuries at birth	36		

ONE WEEK TO TWO WEEKS, 103.

Prematurity	39	Syphilis	6
Injuries at birth	10	Other causes peculiar to early	
Congenital malformations	6	infancy	32
Congenital debility	10		

TWO WEEKS TO ONE MONTH, 138.

Prematurity	38	Congenital malformation	14
Broncho-pneumonia	13	Diarrhœa and enteritis	12
Acute bronchitis	9	Pneumonia	8
Erysipelas	4	Syphilis	4
Congenital debility	19	All other causes	17

THE RELATION OF TUBERCULOSIS TO WAR CONDITIONS.

Newsholme (The Lancet) discusses tuberculosis and the war. He notes the increased mortality not only from tuberculosis in all its forms, but also from influenza and bronchitis during the past three years. After reviewing the methods of administrative control of tuberculosis in England at the outset of the war, he discusses the difficulties and defects of this system

as shown up by war conditions. These difficulties and defects may be considered under the following headings: (1) With relation to the patient: Owing to the increased demand for labor and higher wages, poor patients with tuberculosis are not seeking medical advice as was formerly the case. (2) With relation to the private practitioner: It is evident that, with so many of those in military service, those remaining are overworked and cannot do as much good or give so much individual attention as was the case prior to the outbreak of the war. (3) The tuberculosis officer: Many full time persons of this nature have been replaced by men working only part time, with naturally poor results. (4) Sanatoria: The results from the sanatoria are not so good as formerly, owing to the fact that not only are incipient cases less frequent but also advanced consumptives who formerly would not have been admitted to a sanatorium are now sent there because there is no other place for them to go. Sanatorium and hospital treatment are the most important parts of any war program for tuberculosis. Unless many beds in each of these institutions are available such a program is bound to fail.

ARTIFICIALLY COLORED SALMON.

On a tour of inspection an inspector of this department found in one of the large fish-curing establishments in the city a unique way in making salmon marketable.

Salmon, which in the trade is known as "fall" or "dog" salmon and is of a dirty, grayish color, and of inferior grade, is given coat of coloring. After painting, the fish is later smoked and shows a real salmon hue so that it becomes most attractive to the purchaser. Specimens of the salmon, the liquid used, as well as the brush and bucket, were brought to this office and examinations made. The analysis, although not complete, has shown this liquid to be a coal-tar product, and consequently a food adulteration calling for prosecution in court.

In talking with an employee at this establishment our inspector was told that the liquid was used for painting trucks. It gives a permanent dye to absorbent cotton, wool, etc., and a handkerchief was dyed a beautiful salmon color with the mixture.

The percentage of city boys rejected in the draft for physical reasons was no greater than that of country boys.

DANGER TO THE OVERZEALOUS FROM WAR ACTIVITIES.

Many young people who, before the war, never engaged in manual labor of any sort are now at work in factories and machine shops, and this is especially true of women taking the place in the business world of the men now away at the front. They are unused to severe, taxing labor. They are not trained like their fathers were in the struggle for existence. And it is difficult for them to realize that they are not as capable physically as their fathers were to meet the grim exigencies which war has brought upon us. So it may not be amiss to warn them against overzealousness, overstrain and the overtaking of their minds and bodies.

They should have plenty of rest and recreation after their day's work is done. They should retire early, seek fresh air for their leisure hours to offset the vitiated air of the work room, eat good wholesome food, avoid excesses of all sorts and especially the irritation and worry that excitement and hurry entails.

CHILDREN'S PLAY — A PATRIOTIC CALL.

"Public provision for recreation is not a luxury to be shut off but a necessity to be conserved.

"An English authority has lately pointed out the demoralization to boys and girls caused by breaking down of clubs and the withdrawal to the army of recreation leaders, and he has traced much of the increase in juvenile delinquency in England to the chaos in recreation activities which has prevailed since the war.

"This is a good time to remind ourselves that the continuance and development of all types of innocent and healthful recreation in every community offer a call to patriotic service for many who cannot go to the front. The strain and anxiety which are certain to grow in this country for an indefinite period ahead of us need to be counterbalanced by greater community effort to provide opportunity for wholesome play."

The teeth are valuable and should be kept in good condition. Consult your dentist twice a year and have him make necessary improvements. Do not allow the child's teeth to become neglected. Make a child familiar with the use of a toothbrush, —after each meal and before retiring. This is a habit that should be cultivated.

FOREWORD FROM THE "VANGUARD."

Concerning Ourselves.

We have been together now for about five months. What has discipline, close contact with others, and the forming of new friendships done for us? Let us take an inventory of ourselves.

In the first place we are learning to coördinate both mind and body — the ability to think and act quickly. Secondly, we are gaining self-confidence — the strength to stand alone on one's own feet and face the world. We are grasping the viewpoints of others, balancing them with our own, and are forming new conclusions. Little by little we are cracking the veneer of self and are finding that there is someone else in the world beside ourselves. In all, we are receiving a wonderful training for the future. Who knows what emergencies or what problems may be met and solved by those qualities or factors which we are now acquiring?

It is the time to "make or break."

It's up to us.

It is typically American to create — to "make things." This trait is fundamental either in "rolling your own" or in building a sky-scraper — either in inventing a sleeve-valve motor or a machine gun. There is a certain satisfaction in molding one's thoughts into material substance in watching them take individualistic form. The "Vanguard" offers a glorious opportunity in this direction. With all the potential power in this unit we can make it a paper that can't be beat. We can make it truly representative, and so, something to be proud of. If each one does his bit, this is assured. Are you with us in the next issue?

(The "Vanguard" is a twelve-page, semi-monthly publication issued by Harvard Base Hospital 5, U. S. A., in France, and the above is taken from a copy of the first issue just received.)

Every organization and individual should join in the great welfare drive which the Federal Children's Bureau has recently announced. The drive will begin on April 5, one year from the day the United States declared war, and the first day of the Children's Year. It is expected that the lives of one hundred thousand babies will be saved this year because of this work.

The death rate from typhoid fever continues to decrease in this city.

PATRIOTISM.

“Patriotism,” declares our President, “consists in some very practical things—practical in that they belong to the life of every day, that they wear no extraordinary distinction about them, that they are connected with commonplace duty.

“The way to be patriotic in America is not only to love America, but to love the duty that lies nearest to our hand, and know that in performing it we are serving our country.”

REPORT OF THE HEALTH UNIT FOR THE MONTH OF FEBRUARY, 1918.

Health Department.

Visits made by medical inspector:

Contagious	43
Tuberculosis	2
Ophthalmia	7
Miscellaneous	20
Total	<u>72</u>

Cases visited by nurses:

Medical	182
Babies	100
Total	<u>282</u>

Defective sanitary conditions found in tenement houses,	9
Calls by district physician from Boston Dispensary .	184

Instructive District Nursing Association.

Visits made by nurses	690
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Baby Hygiene Association.

Total number of babies cared for	158
New babies admitted	15
Conference held	1
Total conference attendance	4
Home visits by nurses	179
Babies readmitted	285

Associated and Hebrew Federated Charities.

Cases investigated and assisted	13
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Consumptives' Hospital Department.

Calls by nurses in district	625
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SUMMARY OF VITAL STATISTICS.

There were 1,258 deaths reported in the month of February, against 1,203 in the corresponding period last year, a death rate of 20.91 against 20.03.

Reported deaths of nonresidents numbered 171, against 160 last year.

Of deaths from reportable diseases the principal decreases and the principal increases were:

Scarlet fever	4
Measles	7
Pulmonary tuberculosis	18
Whooping cough	10

Other important differences were:

Decreases:

Heart disease and nephritis	5
Puerperal diseases	12
Erysipelas	7
Accidental and violent	10

The principal increases were:

Pneumonia	49
Syphilis	8
Cancer	5

There were 14 more deaths under 1 year, 62 more under 5 years, and 35 less over 60 years.

NUMBER OF CASES AND DEATHS FROM COMMUNICABLE DISEASES FOR FEBRUARY.

	CASES.			DEATHS.		
	1918.		1917.	1918.		1917.
	Total.	Non-Resident.	Total.	Total.	Non-Resident.	Total.
Diphtheria.....	328	40	300	25	13	24
Scarlet fever.....	161	32	147	4	1	8
Measles.....	613	15	487	8	1	1
Typhoid fever.....	8	1	9	2	1	.....
Whooping cough.....	200	.....	8	11	1	1
Pulmonary tuberculosis.....	228	11	177	109	8	91

MORTALITY FOR FEBRUARY AND CORRESPONDING MONTH IN 1917.

	1918.	1917.
Total deaths	1,258	1,203
Nonresidents	171	160
Rate	20.91	20.30
Corrected rate (nonresidents deducted)	18.07	17.60
Deaths under 1 year	190	176
Deaths under 2 years	243	204
Deaths under 5 years	295	233
Deaths over 60 years	398	433

CAUSES OF DEATH.

	Totals, 1918.	Non- residents, 1918.	Totals, 1917.
Anterior poliomyelitis	2	—	—
Cerebro-spinal meningitis	6	1	2
Diphtheria	25	13	24
Measles	8	1	1
Scarlet fever	4	1	8
Tuberculosis (pulmonary)	109	8	91
Tuberculosis (other forms)	11	3	13
Typhoid fever	2	1	—
Whooping cough	11	1	1
Accidental and violent	80	13	90
Heart disease, endocarditis, pericarditis and nephritis,	246	19	251
Bronchitis	16	—	15
Cancer	71	—	66
Diarrhea and enteritis (under 2 years)	11	2	14
Diarrhea and enteritis (2 years and over)	3	1	4
Erysipelas	8	—	15
Meningitis and encephalitis	3	—	1
Old age	2	—	2
Pneumonia	271	26	222
Premature birth	34	4	37
Puerperal diseases	9	2	21
Rheumatism	1	—	1
Syphilis	11	2	3
Influenza	9	—	10
Other causes	305	83	311

**The Following is a Summary of the Work Done by the
Different Divisions in the Department for February,
1918.**

CENTRAL DIVISION.

Prosecutions authorized	6
Stable hearings	2
Temporary stable permit	1
Premises ordered vacated	5
Miscellaneous orders	4
Applications lying-in hospitals approved	2
Forcible removal ordered	1
Proposal	1
Appointment	1
Conferences	3
Leaves of absence granted	2
Hearings	2
Court execution	1
Regulation amended	1
Dump applications	25
Resignation	1

Licenses — Permits.

Applications for peddlers' licenses approved	393
Licenses to peddle fruit and vegetables	59

Manicure — Massage	6
Dump permits	13
Special permits	2
Grease (licenses to remove renewed)	12
Hen permits	2
Numbers assigned	72
Sundry licenses	2
Vehicles inspected and approved	46
License revoked	1
Undertaker license suspended	1
Offensive trade licensed	1

MEDICAL DIVISION.

Communicable Diseases.

Number of visits by medical inspectors	945
Antitoxin given	30
Deaths investigated	18
Cases brought to Boston for treatment	112
Vaccinations	55
Vaccination certificates	27
Antityphoid vaccine administered	1
Forcible removals recommended	2

Public Health Nursing.

Communicable disease visits	2,236
Number of revisits (infants)	2,866
Number of new babies visited	879
Total visits by nurses	<u>5,981</u>

BACTERIOLOGICAL LABORATORY.

Examinations for Diagnosis and Release.

Diphtheria	1,873
Tuberculosis	406
Typhoid	73
Gonorrhea	448
Gonorrheal ophthalmia	34
Syphilis	571
T. B. Comp. Fix. Test (special examinations)	571
Other examinations *	65
Bacteriological milk examinations	544
Bacteriological water examination	1
Bacteriological ice cream examinations	12

FOOD INSPECTION.

Live Stock Inspected at Brighton Abattoir.

Cattle inspected	507
Calves inspected	4,392
Sheep inspected	1
Swine inspected	3,907

* Examination of rats, 44; Genito-Urinary Tuberculosis, 6; Ophthalmia, 40, Malaria, 3; K. L. Vir., 2; Anthrax, 2; Grain, 3; Rabies, 2; Vaccine, 1; Bacon, 1; Spinal fluid, 1.

Animals condemned, whole	3
Parts condemned	185
Stores inspected	1,246
Court cases	18
Fines	\$337

MILK INSPECTION.

(Examinations as to Statute Requirements.)

Samples examined:

Chemical examinations of milk	1,329
Bacteriological examinations of milk	544
Chemical examinations of vinegar	29
Chemical examinations of butter and cheese	64
Chemical examinations of ice cream	10
Miscellaneous examinations	26
Number of court cases	45
Fines	\$770

Inspection of Provisions — Articles Condemned.

Meat and Fish:

Poultry	50 pounds
Haddock	600 pounds
Salt pollock	279 pounds
Salt herring	6,390 pounds
Scallops	424 gallons
Shrimp	480 pounds

Miscellaneous:

Eggs	150 dozen
Chestnuts	50 pounds
Carrots	14 bushels
Grape fruit	5 crates
Oranges	25 dozen
Cabbage	10 barrels
Onions	60 bushels
Sweet potatoes	50 baskets
Potatoes	46 bushels

SANITARY INSPECTION.

New reports	4,076
New tenement house reports	135
Legal notices recommended	744
Reinspections	6,289
Nuisances reported	4,483
Complaints investigated	577
Court cases	5
Fines	\$35

MORBIDITY AND MORTALITY. (2 Months.)

	1918.	1917.
Total deaths	2,550	2,568
Nonresident deaths	340	338
Deaths under 1 year of age	385	343
Pneumonia	505	481
Cancer	154	149
Heart disease and nephritis	453	525
Diarrhea and enteritis under 2 years	20	24

DEATHS FROM COMMUNICABLE DISEASES. (2 Months.)

	1918.	1917.	1918. Non- residents.
Diphtheria	62	49	25
Scarlet fever	12	9	2
Measles	20	3	2
Typhoid fever	4	2	2
Whooping cough	22	3	1
Tuberculosis	218	192	14

CASES OF COMMUNICABLE DISEASES REPORTED. (2 Months.)

	1918.	1917.	1918. Non- residents.
Diphtheria	758	589	90
Scarlet fever	334	295	60
Measles	1,123	854	17
Typhoid fever	11	16	1
Whooping cough	490	26	—
Tuberculosis	440	386	27

MONTHLY METEOROLOGICAL SUMMARY, FEBRUARY.

ATMOSPHERIC PRESSURE.

(Reduced to sea level; inches and hundredths.)

Mean, 30.03; highest, 30.71; date, 22; lowest, 28.87; date, 26.

TEMPERATURE.

Highest, 57; date, 15; lowest, —10; date, 5; greatest daily range, 43; date, 20; least daily range, 9; date, 16; normal for month, 28.0°.

PRECIPITATION.

Total this month, 2.30; snowfall, 5.7; greatest precipitation in 24 hours, 0.82; date, 1; snow on the ground at end of month, T*; normal for this month, 3.44.

WIND.

Prevailing direction, southwest; total movement, 8,221 miles; average hourly velocity, 12.2; maximum velocity (for five minutes), 48 miles per hour from east, on 26th.

WEATHER.

Number of days clear, 6; partly cloudy, 13; cloudy, 9; on which .01 inch or more of precipitation occurred, 12.

MISCELLANEOUS PHENOMENA (Dates of).

Auroras, 0; halos: solar, 12, 14, 16, 18, 22; lunar, 23, 24, 27; hail, 0; sleet, 0; fog, 0; thunderstorm, 0; frost: light, —; heavy, —; killing, —.

* T indicates trace of precipitation.

Although in 1917 the population was twice as large as in 1882, and the number of births only about half as many, yet last year there were only about the same number of deaths from infants under one year of age.

Human health and human efficiency are the two most precious things on earth. If out of this awful labor of war a strong health sentiment for the entire nation can be born then will our sacrifices not have been in vain.

*RUPERT BLUE,
Surgeon General, U. S. Public Health Service.*

1554
MARCH, 1918

MONTHLY BULLETIN
HEALTH DEPARTMENT
OF THE
CITY OF BOSTON

MAY 6 1918



FRANCIS X. MAHONEY, M. D., *Commissioner*

STATISTICS FOR 1917.

Population	772,370		
Births	19,856	Birth rate	25.7
Deaths	12,721	Death rate	16.47
Of these total deaths 15 per cent were nonresidents.			

BOSTON
HEALTH DEPARTMENT
CITY HALL ANNEX
1918

HEALTH DEPARTMENT.

(Tel. Fort Hill 5100.)

Commissioner of Health.

Secretary	1109 City Hall Annex.
Publications	1109 City Hall Annex.
Licenses	1109 City Hall Annex.
Medical Division	1107 City Hall Annex.
Communicable Diseases	1107 City Hall Annex.
Child Hygiene	1108 City Hall Annex.
Health Unit	17 Blossom street.
Vaccination Station	17 Blossom street.
Detention Hospital	Southampton street.
Occupational Clinic	17 Blossom street.
Bacteriological Laboratory	1101 City Hall Annex.
Examination of Cultures	1101 City Hall Annex.
Wassermann Tests	1101 City Hall Annex.
Food Inspection Division	1110 City Hall Annex.
Inspection of Foodstuffs	1110 City Hall Annex.
Examination of Milk and Vinegar	1104 City Hall Annex.
Inspection of Dairies	1102 City Hall Annex.
Brighton Abattoir	Market street, Brighton.
Sanitary Inspection Division	1111 City Hall Annex.
Abatement of Nuisances	1111 City Hall Annex.
Examination of Gas Fitters	1111 City Hall Annex.
Vital Statistics Records and Accounts	1112 City Hall Annex.
Permits for Burial	1112 City Hall Annex.
Superintendent of Peddlers	27 North Grove street.

OFFICE HOURS.

The Health Department will be open from 9 a. m. to 10 p. m., except Saturdays, when the hours will be from 9 a. m. to 1 p. m. and from 5 p. m. to 10 p. m. Sundays and holidays, from 10 a. m. to 12 m. and from 5 p. m. to 10 p. m., for the reporting of cases of communicable diseases, issuing of burial permits, the distribution of antitoxins and vaccines, and the receiving of cultures and widals.

FREE WASSERMANN TESTS.

The Bacteriological Laboratory is prepared to examine blood specimens by the Wassermann test for syphilis free of expense. Tests are made each Tuesday, Wednesday, Thursday and Friday. Blood is drawn from patients in the laboratory each Monday, Tuesday, Wednesday and Thursday from 2 to 4 p. m.

MONTHLY BULLETIN

OF THE

HEALTH DEPARTMENT OF THE CITY OF BOSTON.

FRANCIS X. MAHONEY, M. D., *Commissioner of Health.*

All communications relating to this publication should be addressed to Editor, BULLETIN
OF THE HEALTH DEPARTMENT, BOSTON.

VOL. 7.

BOSTON, MARCH, 1918.

No. 3

Let proper hygiene be your guide.

THE CONSERVATION OF DIRTY AIR.

During the past few years elaborate efforts have been made to demonstrate experimentally the effects on human beings of using second-hand air for breathing purposes. The results of these experiments seem to be tending to create a belief that a complex gaseous mixture which has been swapped around indefinitely through different people's systems, shaken up with dust, bits of clothing and furniture, epithelium, mold fungi and bacteria, is just as good for human beings to live in and breathe as fresh air, provided the mixture be made dry and served slightly cool. Such a mixture, which has acquired a temperature of from 20 to 80 degrees above the outside air, is especially valuable at the present costs of food, fuel and labor. If all it needs to make it continue to serve the purposes of human life and health is to treat it a little, why not treat it and conserve the valuable heat units it contains?

There was once a farmer who gave indications of the possession of the mental qualities which make a laboratory investigator, but he was one of the poor unfortunates who never get a show in the world and he remained a plain farmer. As he saw the products of his toil and sweat disappearing down the throats of his cattle, he wondered if experiment might not show that such consumption of fodder was entirely unnecessary. With true laboratory instinct he selected a horse for his experiment. Little by little he reduced this horse's food supply. The horse continued to live. Finally he had the horse so trained that it could live on one straw a day. Unfortunately for the continued success of the demonstration, there then occurred

one of those accidents which come so often to spoil a laboratory experiment. The horse died. He died suddenly with symptoms not referable to the digestive tract, but to the nervous system, suggesting of course some congenital defect in that part of the horse's make-up.

It is to be noted that similar unfortunate accidents are always occurring when human beings are deprived of fresh out-of-doors air. They do not die immediately. They do not die of suffocation. They may not even die of respiratory diseases. It makes no difference whether they be soldiers who have taken such means as their ingenuity can devise to prevent the warm atmosphere from getting out of their tents or a number of young babies kept together in a beautiful hospital ward with theoretically sufficient ventilation. Young babies kept together "don't thrive." The soldiers also begin to die after a while. It may be from pneumonia, from meningitis, following ear trouble, following a "cold," or it may be from something else; it may be months afterwards from tuberculosis or it may be years afterwards from a damaged heart or diseased kidneys traceable to an attack of tonsilitis or some other acute infection. They may not all die. It was reported some years ago that an inquisitive German who investigated the life habits of centenarians in Saxony found that the only points on which there appeared to be a common agreement among them was with respect to an aversion to water and fresh air. This story may or may not be true, but it is not at all improbable. All animals and plants tend to develop a resistance to conditions unfavorable to life. A few individuals may be expected to survive conditions which prove fatal to the great majority, but the survivors may not be the fittest from point of view of practical usefulness. The village centenarian's only claim to distinction is usually that he has managed to live a hundred years.

The value of the work of laboratory investigators in promoting health and usefulness cannot be overestimated, but in spite of all that has been done by them to point out rational methods of preserving human life and efficiency, there is, nevertheless, much in this connection that still remains undone, and in no respect are the results of laboratory research less satisfactory than in its attempts to account for the beneficial effects on health of life in the open air.

Nor should we forget that in many instances modern research methods have only explained the real reason for practices which experience had already shown to be efficacious in preserving

the health of human beings. One only has to read of the methods by which success was attained over a hundred years ago by Admiral Collingwood or by Captain Cook in the preservation of the health of their crews to see how clear headed, observant men could utilize practical experience in a way that reflects no credit on many of those who in similar positions in recent days have had the lives and health of men intrusted to their custody.

Practical experience has always shown that human beings do not tend to thrive in an indoors atmosphere. They may live, but they are never at their best either physically or mentally under such conditions. Fresh air admitted in amounts theoretically sufficient to supply all needs of the human economy never has the same effect as even the frequent flooding of indoor habitations with fresh outside air. The victim of tuberculosis who steadily grows worse in a well ventilated room improves and gets well when he lives and sleeps out of doors.

Experience has taught us that it may be fairly safe to crowd a collection of men for a week or two under housing conditions which cannot be continued indefinitely without disastrous results. It has also been found practicable to keep men for a portion of each day in bad atmospheric conditions without serious results provided the rest of their time they spend in the open air just as they may be permitted to get dirty provided they wash. There is, in fact, something more than a mere analogy between fresh air and washing. In instances of notable success in preserving the health of collections of men we will always find a liberal fresh air supply and insistence upon mechanical cleanliness of bodies, clothing and quarters coupled together.

Few of us can live out of doors even as much as we would wish. What lessons, therefore, applicable to conditions of human life in a city like Boston, are to be derived from the teaching of experience of the character just mentioned! The aim should be to keep not only our bodies but clothing, habitations and everything connected therewith in a state of actual cleanliness. Those active agencies for the spread of disease, public conveyances, must also receive attention. In so far as cleanliness can be maintained by soap and water, this is to be regarded as the method of choice. To a great extent, however, we are practically dependent on the cleansing properties of fresh air. If fresh air can be supplemented by Nature's germicide and disinfectant, sunshine, so much the better.

Aside from the beneficial effects of breathing and exposing

the skin daily to out-of-doors air, dry moving fresh air cleanses our wearing apparel as well. Human habitations also should be washed out at least once daily with fresh air. This does not mean that living rooms be kept cold and uncomfortable. Cold indoor air is certainly no more beneficial than comfortably warm indoor air. Neither does this necessarily mean burning enough coal at \$16 a ton to heat continuously a gale blowing through the house. It does mean opening up the house and giving its interior a fresh air bath, and the greater the difference between the inside and outside temperature the more easily, thoroughly and quickly the bath is accomplished. So also the more closely the interior and outside temperatures approach the greater the difficulty in satisfactorily "airing out" a room, and in this connection it may be significant that increases in "contact diseases" in this city are characteristic of mild winter weather rather than a continued low temperature. Cleanliness of human habitations necessarily includes cleanliness of carpets, rugs, furniture, hangings and bedding as well as of floors and woodwork and so long as houses contain unwashable furnishings the maintenance of their cleanliness must depend chiefly upon fresh air cleansing. Experience has taught that in the preservation of the health of men cleanliness of bedding is especially important. If the old-fashioned practice of some European people of hanging their bedding out of the windows daily in pleasant weather were generally observed, it would undoubtedly result in a lowering of the death rate in this city, but under the present conventional standards of cleanliness the adoption of the practice would of course jeopardize social standing in almost any neighborhood in Boston.

The reduction in recent years in deaths from certain diseases to which we point with so much pride have been due to brilliant discoveries, the application of which involves no change in the personal habits of people. In such instances, ways have been found to immunize people to infection or to lessen the opportunities of people to infect themselves as in the case of water and milk supplies. The decrease in death rates and the apparent lengthening of life is due almost entirely to the reduction of deaths by such means during the first years of life. As far as can be seen, deaths from premature degenerative bodily changes, or, in other words, from premature old age, are tending to increase rather than decrease. In spite of all we know about tuberculosis, progress in the reduction of deaths from this disease is now very slow. Deaths from pneumonia are almost certainly on the increase and other infective processes

dependent upon human personal contact are exhibiting the same sort of an increasing virulence that one sees in laboratory experiments in passing pathogenic organisms through susceptible animals, one after another. Indoor life undoubtedly has a direct bearing on the development of premature degenerative changes in the bodily tissues, but leaving this matter entirely out of consideration, our only definitely known means of protection against acute contact diseases of the character just mentioned is in the observance of cleanliness comparable to that which has made possible modern progress in surgery. The avoidance of infection in surgery has involved a radical departure from the practices of old-time surgeons and the avoidance of infection with contact diseases demands no less a change in the habits of people generally. In both instances, cleanliness practically means not the absolute destruction of all infective organisms but the dilution of their quantity, a lessening of the dosage one is likely to get, to the point when it has lost its power to do harm. Dissipation of infective material in a liberal amount of fresh air may serve to this end as well as dilution, destruction or removal with soap and water. If air must be relied upon for this purpose, it would be as reasonable to depend upon the amount theoretically needed by the body for nutritional purposes alone as it is to expect to get a satisfactory bath with a cupful of water.

TREATMENT OF PNEUMOCOCCUS INFECTIONS.

An interesting suggestion with reference to the treatment of pneumonia and other infections due to the diplococcus of Weichselbaum comes from Dr. Edward H. Ochsner* of Chicago.

While Doctor Ochsner owes his fame chiefly to his work in surgery, he has sufficient notable successes in other fields to his credit to entitle any practical suggestions from him to serious consideration.

Doctor Ochsner states that his experience has led him to believe that boric acid is a specific in surgical conditions in which the "diplococcus of Weichselbaum is the causative agent." The unexpected rapidity with which open conditions of this character recovered under boracic acid dressings apparently led Doctor Ochsner to administer boric acid by mouth in cases of internal infection of the same character. For such

* A paper read before the Chicago Medical Society, April 18, 1917, and printed in the "Illinois Medical Journal" of June, 1917.

conditions he administered boracic acid in the form of a half an ounce of a saturated solution three times daily and in other cases in five-grain doses six times daily. He furthermore urges against the use of alkaline expectorants in pneumonia or alkaline applications of any sort in other infections due to the pneumococcus, believing that such use of alkalis tends to maintain the conditions of an alkaline medium which bacteriologists find necessary for the growth of the pneumococcus. While not going so far as to formulate a definite plan of treatment with boric acid he states that he believes "that boric acid is just as much a specific for infections caused by the diplococcus of Weichselbaum as quinine is for malaria, and diphtheria antitoxin is for diphtheria." In apologizing for presuming to give suggestions outside of his special field of work, Doctor Ochsner makes the interesting observation that "most of the great scientific and medical truths have been discovered not by specialists in their own field, but by men outside of the specialties; thus the law pertaining to the conservation of energy was not discovered as one would naturally suppose by a physicist, but by a physician; bacteriology, the very foundation of modern medicine, was given its first start not by a pathologist, but by a botanist; the spirillum of cholera and the tubercle bacillus were discovered not by a pathologist, but by a country practitioner; the first great work in agricultural chemistry was written not by a professor of agriculture, but by a physiological chemist."

AVOID HAY FEVER.

From May 15 to July 20 the vernal hay fever season begins and this form is due principally to the pollen of grasses as contrasted with the autumnal form, August 17 to October 1, due to the many kinds of weeds.

HEALTH METHODS.

The following very good suggestions come from the *Rochester Bulletin*:

We are to send our soldiers out to do battle with a ruthless and merciless enemy. We are going to try to protect our soldiers against disease. We are going to feed them well, clothe them well and, we trust, pay them well and protect them against disease. Next to doing all these and many other things, we

can hearten our soldiers by taking care of those whom they leave at home, and nothing can give to our men whom we send to the front more confidence in our work for them than to care for the material needs of those whom they leave behind, as well as to care for their health. At no time in the history of modern wars has the health of the soldier been so conserved as it is today. The report of a Canadian expeditionary force of more than 52,000 men gave over 8,000 killed and 37,000 wounded and only 452 died of disease. This is in marked contrast to the old wars, where for every man who was killed in action two and one half to three died of disease. The *Toronto Health Bulletin* gives the following summary of the chief methods responsible for keeping the army in the field in Health:

Inoculation against typhoid and para-typhoid fevers.

Incineration and burial of all excreta which might contain dangerous germs.

Prevention of breeding places for flies; general sanitation.

Filtration and chlorination of water.

Field laboratories for investigating epidemics, research, scientific diagnostic work, etc.

Rapid removal of all cases of infectious disease from the army.

Inspection and care of food. No raw milk or vegetables can be used.

Army baths; frequent issue of clean underclothing and socks.

Sick parades; treatment of mild disorders by medical officers; care of feet.

Rest stations and convalescent homes for tired and mildly shocked soldiers.

Plenty of good and varied food; warm clothing and exercise.

Relaxations and amusements; concerts, games, etc.

To the end that we may conserve the health of our people, we are trying to protect our children by vaccination against whooping cough and diphtheria and against smallpox, which even now is said to be raging in parts of Germany, and to protect our adults and grown-ups against typhoid in the same way that we trust our soldiers are to be protected against typhoid.

There is no reason today why anyone should have whooping cough, diphtheria, typhoid or smallpox. Vaccination will protect in nearly every case. No matter when you were vaccinated against smallpox, you ought to be revaccinated or retested to see that your vaccination is still protecting you, and in typhoid (if you have been vaccinated) you ought to be retested to show that your typhoid vaccination is still protective. You then are really bonding yourself against disease.

Just as you bond yourself against disease, so, we trust, you bought a Liberty Bond to the extent, not only of your

resources, but to the extent of your borrowing ability. A Liberty Bond is no gift to your country; it is simply one kind of a pledge of your allegiance to it, a desire to aid her and those countries combined with her, and the whole world, in defence of the rights of man.

CHANGE IN LIVING CONDITIONS.

Fresh air and sunshine appeal to most people and especially when the weather is warm and pleasant. We cannot get too much of them. Our thoughts now naturally turn to the country and the beaches. In considering your vacation place or camp, first consider your health. If you will do this you will first inquire about the water supply that supplies your camp or summer hotel. You will look about to see if there are places for flies and mosquitoes to breed, garbage, manure, stagnant ponds or low and damp land. Try to choose a place where the bathing is good, the water supply is unquestionable and the food supply and advantages are satisfactory and where hygienic conditions in general prevail.

CLEANLINESS.

Cultivate clean habits, person and premises. Do not be neglectful about clean and proper living. This means your homes. It means that with the warm weather there should come an inclination to improve your surroundings and get rid of all rubbish and dirt that has collected during the winter. Sanitary and gas fixtures should be examined, yards and cellars cleaned and a liberal application of hot water and soap, white-wash and paint and paper applied to the interior of your homes.

To do this there should be no entreaty. Pride alone should prompt it. There are rules and regulations that demand it. The Health Department will continue to vacate houses or prosecute owners of premises just so long as they fail to maintain in a sanitary condition premises owned by them.

REGULAR EATING.

Irregular eating and overburdening of the stomach lead to many ills that become serious. When everything is being done to save and conserve food heed should be taken to the many warnings and, with a twofold object in mind, we should correct our ways and try to treat our stomachs properly and at the same time help the soldiers abroad.

Regulate the time you eat and the quantity and quality of your food. Excesses of food, tobacco and alcohol will break down the strongest digestive system. It cannot stand this overburden and overwork. This damage may begin and continue without any evident ill feeling until serious illness results, which it is often too late to remedy. The accumulation of toxic elements in the system become apparent and finally make themselves evident.

There appears by statistics to be a constant increase in the death rate from constitutional diseases. Each year deaths from Bright's disease, hardening of the arteries, heart disease and other diseases indirectly due to improper hygiene of the individual, continue on the upward trend. It is time to halt and consider. We should begin to reckon with ourselves. We are shortening our lives by this irregular mode of living. Is it worth while?

DEFINITION OF INFECTIVE STAGE OF VENEREAL DISEASE.

Many requests are being received by the State Department of Health for an authoritative definition as to what is intended by the term "infective stage" of venereal disease, as used by this department in the circular making these diseases reportable.

The term "no longer in an infective stage" is by no means a synonym of "cured." The syphilis patient who, for example, has had a few doses of arsphenamine may no longer be in an actively infectious state so far as the general public is concerned, yet he would be far from being cured. In order to give the practitioner something definite to go on, the following official interpretation of the term "infective stage" is offered for the purposes of reporting:

Syphilis.—A patient suffering from syphilis shall be considered to be in an infective stage so long as he shows any symptom of lesion of primary or secondary syphilis, or any discharging lesion, of the tertiary stage.

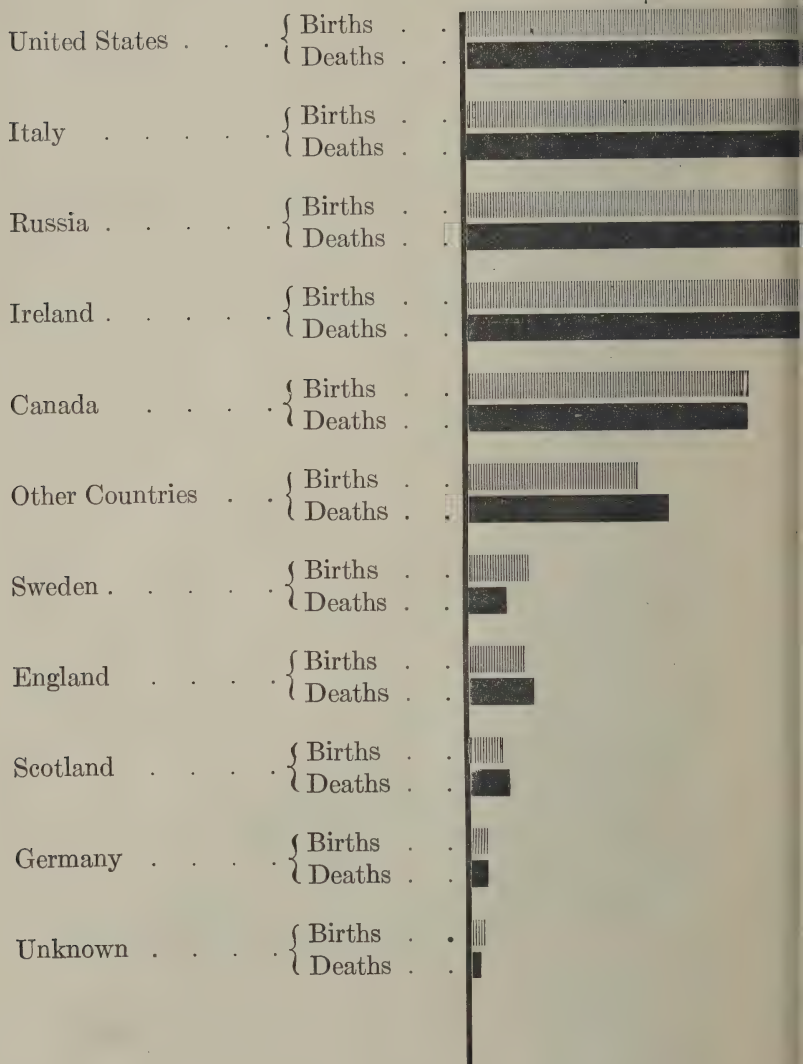
Gonorrhea.—A patient suffering from gonorrhea shall be considered to be in an infective stage until two negative laboratory tests have been obtained from specimens taken at least a week apart.

Buy no food from dirty stores.

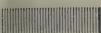
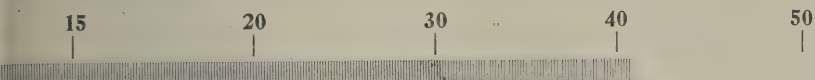
Protect the baby against flies, dirt and careless bottle feeding.

BIRTHS AND DEATHS, 1917, WITH BIRTHPLACES C DEATHS UND

5



ERS, BY PERCENTAGE TO THE TOTAL BIRTHS AND
YEAR OF AGE.



Births.



Deaths.

“FOOD HOUNDS.”

Before rendering a decision in the Municipal Criminal Court this week Judge Dowd very aptly summed up the situation when he stated he had no sympathy for these “food hounds” who sell not meat but “carrion” to the poor and unsuspecting purchaser at 100 per cent profit. With the present high prices for foodstuffs he believed the people should get at least what they pay for. The retailer was summoned into court on complaint of the department for selling decomposed steak. He admitted to the judge that he paid 19 cents a pound wholesale for it and sold it for 38 cents. The defendant was found guilty and a fine of \$50 was imposed.

The coöperation of the courts has been a splendid asset to this department and an aid to the public in general in protecting them against these purveyors of bad or decomposed food. There are, of course, numberless cases where decomposed food is sold and the purchaser on discovering it at home throws it into the garbage barrel rather than face the ordeal of court. This department is willing to assist the storekeeper as well as the public, but the retailer must be willing to rectify his mistakes and act in harmony with the department. Sympathy with those who do otherwise is wasted and there will be no leniency with men who deliberately dispose of rotten goods in this way. Often these men secure top prices for the inferior article. These violators will be prosecuted to the full extent of the law, and the department invites any person in the city who is sold decomposed goods to immediately get in touch with the food inspection division of the department by telephone and action will be taken at once.

THE IMPORTANCE OF THE TEMPORARY TEETH.

It has been said by an authority that the most important thing that a growing child does, physically, from birth to twelve years of age, is to manufacture in his jaws forty-eight teeth.

The growth and development of the upper and lower jaws are dependent in a great measure on the growth and eruption of the teeth, both temporary and permanent. If the temporary teeth decay, become abscessed or are lost before the time that they should be shed, it has a disturbing action on the development of the jaw tissues in that locality and in this way we have unsymmetrical development and misshapen faces.

Again, the premature loss of the temporary teeth through

decay prevents the child from properly crushing his food and using the muscles of mastication which are attached to the lower jaw. Although it is harmful to bolt one's food and swallow it without chewing, yet it is more harmful for a child not to use the muscles of mastication, as the development of the cranium or brain case is dependent to a great degree upon the pull of these muscles. The muscles that elevate or close the lower jaws are attached to the bones on the side of the face and cranium and also on the underside of the skull. When we chew our food these muscles pull on these points of attachment and in childhood they help to produce well-shaped heads and jaws and symmetrical faces.

When the pulps in the baby teeth are exposed from decay, they not only cause pain and suffering, but bacteria may be carried through this tissue to the tonsils and the glands of the neck. If the pulps die and the cavities are open the bacteria can pass up through the root canals and thus gain ingress into the circulation. Many a child has had his little body infected in this manner and if he recovered some organ or organs of the body were weakened throughout life, becoming a source of future trouble. Professor Osler once said that the troubles we eventually die of were started or produced in our youth, and clinical observation seems to bear out his conclusion.

If the baby teeth decay the cavities get packed with food and become breeding places for millions of bacteria. Great efforts are made by parents to secure pure milk for their children. By pure milk we mean milk that contains but comparatively few numbers of bacteria of a harmless variety. Yet if the parents would look into the child's mouth and could only realize the immense number of germs that were present in those decayed teeth, they would know that it was useless to hope that the pure milk would reach the child's stomach in a pure state after passing over those decayed teeth. Although the temporary teeth are lost in early life, yet it is more important to keep them clean and free from cavities during the growing period than the preservation of the permanent teeth in adult life. Both sets are important, but of the two a clean and sound set of temporary teeth performs a more vital influence for the proper development of a growing body than the functioning of the permanent teeth in adult life.

Rules for Parents to Follow.

1. Do not feed the child on sweets and pastries. These foods quickly ferment in the mouth and aid in causing decay.

2. Do not let the child have food between meals. If he must have something give him an apple or some kind of raw fruit.

3. See that the teeth are thoroughly brushed after each meal and especially just before going to bed. Most of the decay takes place during sleep.

4. The teeth should be rubbed and polished at least once in three months. This polishing process helps very much to prevent decay.

5. Do not wait for the child to have a toothache but take him to the dentist every six months and make sure that any small cavities are filled with a material that will last during the life of the tooth.

(*Bulletin, Health Department, Bridgeport.*)

INFANT MORTALITY RATES IN TEN LEADING CITIES FOR 1917 AND 1916.

	1917.	1916.
St. Louis.....	79.6	89.4
New York.....	88.8	93.4
Boston.....	98.8	103.7
Cleveland.....	100.0	107.0
Detroit.....	103.4	112.8
Buffalo.....	103.6	113.9
Chicago.....	106.3	111.9
Philadelphia.....	111.0	98.9
Pittsburgh.....	111.0	111.8
Baltimore.....	119.26	118.9

NONRESIDENT DEATHS OF INFANTS IN SOME CITIES.

	Boston.	Baltimore.	Detroit.	New York.	Newark.	San Francisco.
Number deaths of infants	1,965	1,783	3,722	12,568	1,038	588
Number deaths of non-residents.	356	34	31	180	25	47
Percentage.....	18%	.8%	1.2%	1.4%	2.4%	12.5%

Replies were received from seven other cities and no account is kept of these non residents.

PROPERLY PASTEURIZED MILK.

From the standpoint of public health proper pasteurization of milk insures an additional element of safety under any condition. Pasteurization is universally recognized as necessary unless there is special assurance that the milk has been so produced and handled that there can be no danger from its use.

Proper pasteurization of milk may be defined as the process of heating the product to 145 degrees Fahrenheit and holding it at that temperature for thirty minutes.

There is no doubt that some milk on the market labeled "Pasteurized" is in fact not properly pasteurized. From a standpoint of bacterial count some of it is in worse condition than before treatment.

The word "Pasteurized" on the milk bottle should be a uniform guaranty to the purchaser that the product has been heated and held at such a temperature that all disease bacteria have been destroyed; that the original physical and chemical properties of the milk have not been altered so as to affect its appearance or taste or render it less digestible, and that it has been cooled and bottled or bottled and cooled in a sanitary manner so as to avoid recontamination. To obtain such results there must be uniform methods of procedure. Health departments must first realize the necessity of a specific definition of the word "Pasteurization." This definition must then be enacted into law. With uniform laws there must be uniform methods of enforcement. The enforcement of such rules means frequent and thorough inspection of milk plants by a competent authority. Not only must the temperature of the milk and time of holding be noted, but samples of the raw and the pasteurized milk must be taken for bacteriological examination.

Every pasteurizing plant should have automatic arrangements for controlling the temperature of pasteurization and a recording thermometer to register the temperature of the milk. The recording sheets should be carefully filed so that the inspector or health officer may have access to them at any time. The recording thermometer shows time and temperature more accurately than any casual personal inspection.

"Birth is not the commencement of life. Every baby born is alive for several months before birth, therefore it is necessary to consider the welfare of the mother and the unborn child."

REPORT OF THE HEALTH UNIT FOR THE MONTH OF MARCH, 1918.

Health Department.

Visits made by medical inspector:

Contagious	41
Tuberculosis	1
Ophthalmia	2
Miscellaneous	20
Total	<u>65</u>

Cases visited by nurses:

Medical	162
Babies	141
Total	<u>303</u>

Defective sanitary conditions found in tenement houses,	8
Calls by district physician from Boston Dispensary .	163

Instructive District Nursing Association.

Visits made by nurses	688
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Baby Hygiene Association.

Total number of babies cared for	179
New babies admitted	21
Babies readmitted	3
Conferences held	5
Total conference attendance	252
Home visits by nurses	415

Associated and Hebrew Federated Charities.

Cases investigated and assisted	12
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Consumptives' Hospital Department.

Calls by nurses in district	650
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SUMMARY OF VITAL STATISTICS.

There were 1,220 deaths reported in the month of March, against 1,206 in the corresponding period last year, a death rate of 18.31 against 18.38.

Reported deaths of nonresidents numbered 194, against 161 last year.

Of deaths from reportable diseases the principal decreases and the principal increases were:

Increases:

Cerebro-spinal meningitis	9
Measles	18
Whooping cough	8

Decreases:

Typhoid fever	4
Scarlet fever	4

Other important differences were:

Decreases:

Premature birth	9
Puerperal diseases	6

The principal increases were:

Pneumonia	18
Heart disease and nephritis	11
Influenza	8

There were 5 more deaths under 1 year, 43 more under 5 years.

NUMBER OF CASES AND DEATHS FROM COMMUNICABLE DISEASES FOR MARCH.

	CASES.			DEATHS.		
	1918.		1917.	1918.		1917.
	Total.	Non-Resident.	Total.	Total.	Non-Resident.	Total.
Diphtheria.....	346	74	350	15	5	19
Scarlet fever.....	134	38	198	4	3	8
Measles.....	888	12	694	20	4	2
Typhoid fever.....	3	.....	9	.....	.....	4
Whooping cough.....	213	1	25	9	.....	1
Pulmonary tuberculosis.....	243	27	246	103	12	121

MORTALITY FOR MARCH AND CORRESPONDING MONTH IN 1917.

	1918.	1917.
Total deaths	1,220	1,206
Nonresidents	194	161
Rate	18.31	18.38
Corrected rate (nonresidents deducted)	15.40	15.93
Deaths under 1 year	174	169
Deaths under 2 years	235	203
Deaths under 5 years	284	241
Deaths over 60 years	391	391

CAUSES OF DEATH.

	Totals, 1918.	Non- residents, 1918.	Totals, 1917.
Anterior poliomyelitis	1	—	—
Cerebro-spinal meningitis	15	3	6
Diphtheria	15	5	19
Measles	20	4	2
Scarlet fever	4	3	8
Tuberculosis (pulmonary)	103	12	121
Tuberculosis (other forms)	17	5	16
Typhoid fever	—	—	4
Whooping cough	9	—	1
Accidental and violent	74	12	72
Heart disease, endocarditis, pericarditis and nephritis, .	239	27	228
Bronchitis	9	2	10
Cancer	85	17	78
Diarrhea and enteritis (under 2 years)	20	7	14
Diarrhea and enteritis (2 years and over)	3	1	7
Erysipelas	5	2	7
Meningitis and encephalitis	1	1	5
Old age	2	1	3
Pellagra	1	1	—
Pneumonia	217	26	199
Premature birth	27	2	36
Puerperal diseases	19	6	25
Rheumatism	1	—	4
Syphilis	11	3	10
Influenza	15	2	7
Typhus fever	1	1	—
Other causes	306	51	324

**The Following is a Summary of the Work Done by the
Different Divisions in the Department for March,
1918.**

CENTRAL DIVISION.

Prosecutions authorized	32
Stable hearings	2
Temporary stable permit	1
Premises ordered vacated	24
Miscellaneous orders	10
Applications lying-in hospitals approved	3
Forcible removals ordered	2
Proposal	1
Appointments	5
Conferences	2
Leave of absence granted	1
Hearings	3
Undertaker's license suspended	1
Cemetery hearing	1
Dump applications	12

Licenses — Permits.

Applications for peddlers' licenses approved	80
Licenses to peddle fruit and vegetables	49
Grease licenses granted	41
Grease licenses renewed	24
Manicure — Massage	8
Dump permits	12
Special permit	1
Grease (licenses to remove renewed)	42
Hen permits	2
Numbers assigned	80
Sundry licenses	3
Vehicles inspected and approved	469
License revoked	1
Offensive trades licensed	3
Milk licenses	333

MEDICAL DIVISION.

Communicable Diseases.

Number of visits by medical inspectors	956
Antitoxin given	23
Deaths investigated	24
Cases brought to Boston for treatment	170
Vaccinations	36
Vaccination certificates	22
Antityphoid vaccine administered	20
Forcible removal recommended	1

Public Health Nursing.

Communicable disease visits	3,238
Number of revisits (infants)	3,831
Number of new babies visited	458
Total visits by nurses	<u>11,527</u>

BACTERIOLOGICAL LABORATORY.

Examinations for Diagnosis and Release.

Diphtheria	1,864
Tuberculosis	476
Typhoid	60
Gonorrhea	640
Gonorrheal ophthalmia	42
Syphilis	843
T. B. Comp. Fix. Test (special examinations)	843
Other examinations *	100
Bacteriological milk examinations	628
Bacteriological water examination	1

* Examination of rats, 66; Genito-Urinary Tuberculosis, 6; Ophthalmia, 40, Malaria, 5; K. L. Vir., 2; Anthrax, 1; Grain, 3; Rabies, 2; Hair, 1; Catgut, 2; Gonn. for comp. fix., 6; Paratyphoid, 2; K. L. Virulence, 4; Spinal fluid, 1.

FOOD INSPECTION.

Live Stock Inspected at Brighton Abattoir.

Cattle inspected	74
Calves inspected	12,657
Swine inspected	4,001
Animals condemned, whole	7
Parts condemned	163
Stores inspected	1,143
Court cases	14
Guilty	14
Appeals	5
Fines	\$1,425

MILK INSPECTION.

(Examinations as to Statute Requirements.)

Samples examined:

Chemical examinations of milk	1,514
Bacteriological examinations of milk	628
Chemical examinations of vinegar	50
Chemical examinations of butter and cheese	43
Chemical examinations of ice cream	16
Miscellaneous examinations	18
Number of court cases	72
Fines	\$1,980

Inspection of Provisions — Articles Condemned.

Meat and Fish:		Meat and Fish:	
Poultry	277 pounds	Liver	20 pounds
Mixed meats	13 pounds	Beef	35 pounds
Salt mackerel	5 pounds		
Swordfish	13 pounds	Miscellaneous:	
Dried fish	97 pounds	Turnips	40 pounds
Oysters	127 gallons	Onions	5,190 pounds
Lamb	130 pounds	Potatoes	7,950 bushels
Pigs' feet	250 pounds	Walnuts	400 pounds
Veal	86 pounds		

SANITARY INSPECTION.

New reports	3,269
New tenement house reports	130
Legal notices recommended	758
Reinspections	5,790
Nuisances reported	4,774
Complaints investigated	621
Court cases	9
Fines	\$50

MORBIDITY AND MORTALITY.

(3 Months.)

	1918.	1917.
Total deaths	3,776	3,774
Nonresident deaths	534	499
Deaths under 1 year of age	560	512

	1818.	1917.
Pneumonia	722	680
Cancer	239	227
Heart disease and nephritis	693	753
Diarrhea and enteritis under 2 years	40	38

DEATHS FROM COMMUNICABLE DISEASES.
(3 Months.)

	1918.	1917.	1918. Non- residents.
Diphtheria	77	68	30
Scarlet fever	16	17	5
Measles	40	5	6
Typhoid fever	4	6	2
Whooping cough	31	4	1
Tuberculosis	321	313	26

CASES OF COMMUNICABLE DISEASES REPORTED.
(3 Months.)

	1918.	1917.	1918. Non- residents.
Diphtheria	1,104	939	164
Scarlet fever	468	493	98
Measles	2,011	1,548	29
Typhoid fever	14	25	1
Whooping cough	703	51	1
Tuberculosis	683	632	54

MONTHLY METEOROLOGICAL SUMMARY,
MARCH.

ATMOSPHERIC PRESSURE.

(Reduced to sea level; inches and hundredths.)

Mean, 29.95; highest, 30.42; date, 11; lowest, 29.37; date, 15.

TEMPERATURE.

Highest, 69; date, 31; lowest, 11; date, 11; greatest daily range, 29; date, 30; least daily range, 5; date, 28; normal for month, 35°.

PRECIPITATION.

Total this month, 3.19; snowfall, 12.8; greatest precipitation in 24 hours, 1.31; date, 1; snow on the ground at end of month, T.*; normal for this month, 4.08.

WIND.

Prevailing direction, southwest; total movement, 8,484 miles; average hourly velocity, 11.4; maximum velocity (for five minutes), 39 miles per hour from northwest, on 15th.

WEATHER.

Number of days clear, 12; partly cloudy, 10; cloudy, 9; on which .01 inch or more of precipitation occurred, 9.

MISCELLANEOUS PHENOMENA (Dates of).

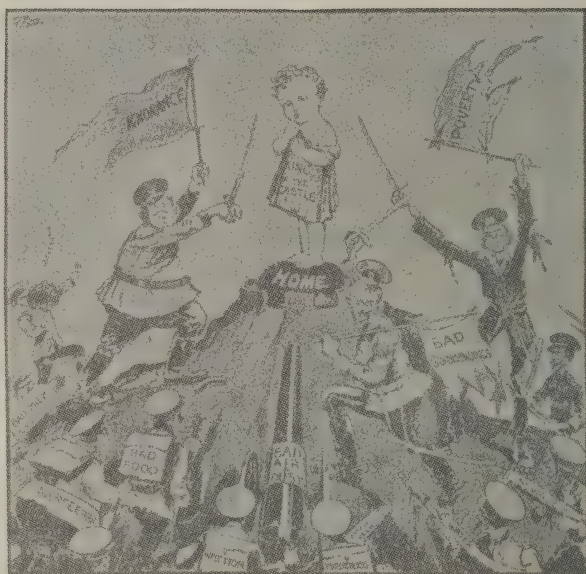
Auroras, 3, 7, 8; halos: solar, 9, 18, 21, 25, 30; lunar, 24; hail, 0; sleet, 1, 10; fog, 20, 21, 22; thunderstorm, 14; frost: light, —; heavy, —; killing, —.

* T. indicates trace of precipitation.

BABY'S FOES

CAPTAINS OF THE HOSTS
OF DEATH ARE

Poverty
Ignorance
Bad Surroundings



THOUSANDS AND THOUSANDS OF BABIES
ARE KILLED BY THESE FOES

OTHERS WHO SURVIVE, STRUGGLE THROUGH
LIFE BEARING SCARS MADE BY THEM

APRIL, 1918

MONTHLY BULLETIN

HEALTH DEPARTMENT

OF THE

CITY OF BOSTON



FRANCIS X. MAHONEY, M. D., *Commissioner*

STATISTICS FOR 1917.

	Population	772,370		
Births	19,856	Birth rate	25.7	
Deaths	12,721	Death rate	16.47	

Of these total deaths 15 per cent were nonresidents.

BOSTON

HEALTH DEPARTMENT

CITY HALL ANNEX

1918

HEALTH DEPARTMENT.

(Tel. Fort Hill 5100.)

Commissioner of Health.

Secretary	1109 City Hall Annex.
Publications	1109 City Hall Annex.
Licenses	1109 City Hall Annex.
Medical Division	1107 City Hall Annex.
Communicable Diseases	1107 City Hall Annex.
Child Hygiene	1108 City Hall Annex.
Health Unit	17 Blossom street.
Vaccination Station	17 Blossom street.
Detention Hospital	Southampton street.
Occupational Clinic	17 Blossom street.
Bacteriological Laboratory	1101 City Hall Annex.
Examination of Cultures	1101 City Hall Annex.
Wassermann Tests	1101 City Hall Annex.
Food Inspection Division	1110 City Hall Annex.
Inspection of Foodstuffs	1110 City Hall Annex.
Examination of Milk and Vinegar	1104 City Hall Annex.
Inspection of Dairies	1102 City Hall Annex.
Brighton Abattoir	Market street, Brighton.
Sanitary Inspection Division	1111 City Hall Annex.
Abatement of Nuisances	1111 City Hall Annex.
Examination of Gas Fitters	1111 City Hall Annex.
Vital Statistics Records and Accounts	1112 City Hall Annex.
Permits for Burial	1112 City Hall Annex.
Superintendent of Peddlers	27 North Grove street.

OFFICE HOURS.

The Health Department will be open from 9 a. m. to 10 p. m., except Saturdays, when the hours will be from 9 a. m. to 1 p. m. and from 5 p. m. to 10 p. m. Sundays and holidays, from 10 a. m. to 12 m. and from 5 p. m. to 10 p. m., for the reporting of cases of communicable diseases, issuing of burial permits, the distribution of antitoxins and vaccines, and the receiving of cultures and widals.

FREE WASSERMANN TESTS.

The Bacteriological Laboratory is prepared to examine free of expense blood specimens by the Wassermann test for syphilis. Tests are made each Tuesday, Wednesday, Thursday and Friday. Blood is drawn from patients in the laboratory each Monday, Tuesday, Wednesday and Thursday from 2 to 4 p. m.

MONTHLY BULLETIN

OF THE

HEALTH DEPARTMENT OF THE CITY OF BOSTON.

FRANCIS X. MAHONEY, M. D., *Commissioner of Health.*

All communications relating to this publication should be addressed to Editor, BULLETIN
OF THE HEALTH DEPARTMENT, BOSTON.

VOL. 7.

BOSTON, APRIL, 1918.

NO. 4

No Health Department, State or Local, Can Effectively Prevent or Control Disease Without Knowledge of When, Where, and Under what Conditions Cases are Occurring.

THE WORK AND PLANS OF THE BOSTON HEALTH DEPARTMENT.

Dreaded diseases were once attributed to pestilential emanations from the ground. This idea is reflected in the statutory law, which still makes it the function of the Boston Health Department to "examine into all nuisances, sources of filth and causes of sickness within its town." To this duty there has been added, from time to time, the task of enforcing other statutory mandates relative to the control of disease, housing, food and drink, some of them carefully drawn in the light of accurate knowledge, and others irrational, ill-advised, in conflict with pre-existing law and unenforceable. The Boston Health Department is thus called on to reconcile obsolete conceptions of the functions of a "board of health" with the present realization of the fact that disease is not spread by pestilential emanations from one's environment, but, either directly or indirectly, by diseased human beings or animals; that sickness is not only undesirable, but represents an economic loss to a community actually measurable in dollars; that such economic loss from contagious diseases is today outweighed by loss from inefficiency, premature old age and untimely deaths attributable to unsalutary personal habits, and that henceforth progress in the reduction of morbidity and mortality must depend more on public health education and its actual application to the correction of faulty personal habits than upon attempts at the legal regulation of the life of a community.

The general death rate of Boston has slowly but steadily decreased year by year. The infant mortality which ten years ago was 148 per 1,000 has likewise been steadily decreasing, and last year, for the first time in the history of the city, fell below 100 per 1,000 to 99.1, and if deaths of children brought from outside the city into Boston for hospital treatment be excluded, Boston's infant mortality now stands at 79.7 per 1,000. In 1916 Boston had the smallest number of deaths from typhoid fever of any large American city, and last year there were still less. Moreover, Boston's death rate from all communicable diseases is comparatively low. The climatic conditions of Boston and its ever-increasing cosmopolitan population do not favor a decreasing death rate. The results just cited are entirely due to the organized and intelligent application of the principles of modern preventive medicine to local health problems.

Gratifying as it is to note the progress which has been made, Boston's health problems are by no means solved, and in this connection the following matters seem worthy of attention: Invalidism and deaths from tuberculosis are still causing an enormous economic loss to the city. Tuberculosis is a contagious disease, and the control of its spread is inseparable from other health problems of the community. Unlike other contagious diseases, Boston has divided the responsibility for the control of tuberculosis between the Health Department and the Consumptives' Hospital Department. Whether this method of attempting to deal with the tuberculosis problem is either economical or efficient is a matter that is deserving of serious consideration.

From an investigation made by the Health Department in 1916 it appeared probable that there were then not less than 8,000 cases of venereal diseases in a contagious stage in the city. War conditions have made this venereal disease problem acute, and the methods in vogue in Boston at present for attempting to control the spread of such diseases are undoubtedly feeble and ineffective. Without waiting to observe the operation of new legislation or radical measures for dealing with this matter, it would seem that so far as merely controlling the spread of venereal diseases is concerned, much might be accomplished through the existing organization and powers of the Health Department, provided there be made by the city provision for the treatment and restraint, if necessary, of dangerous individuals during their period of infectivity, comparable to the provision that now exists for

the treatment and restraint of cases of diphtheria which otherwise would be a menace to the public health.

In recognition of the necessity of public education to progress in health work, the Health Department is maintaining in the municipal building on Blossom street a "Health Unit," or health center. Here talks are being regularly given in different languages on various health topics, women are being instructed in preparation for motherhood and in the care and feeding of children, and desk room and other facilities are furnished to enable the representatives of private organizations interested in physical or social betterment to coördinate their various activities. The results attributable to the work of this health unit are being urged to secure authority to establish two similar units in other parts of the city, and the matter would seem worthy of careful consideration.

CHILDREN'S YEAR.

Every year 300,000 children under five years of age die in the United States. This number of deaths gives America a low position among nations which pretend to care for their infant population. One child in ten dies in the United States as against one child in twenty in New Zealand.

In England at the close of the year 1914-15 it was found that war had taken its toll of babies as well as of men. The birth rate had decreased and the death rate had considerably increased. Even under the tremendous pressure of war, England found it necessary to take steps for the protection of her child population. At the end of the second year of war the report of the chief medical officer of the local government board shows a startling result. The infant death rate had fallen not only far below that of the previous year, but far below that of the year previous to the war.

The Children's Bureau in Washington with Miss Julia Lathrop as its director has undertaken a campaign similar to that of England, in America. Although the United States at present lacks the machinery for such federal aid as England was able to supply, it has sufficient local organization to carry forward this piece of work. The Children's Bureau has therefore decided on a children's year — beginning April 6, 1918, and ending April 6, 1919, during which time a great effort is to be made to reduce the number of child deaths by 100,000. This total is apportioned pro rata among the states and they are individually held responsible for their percentage.

Massachusetts' quota of lives to be saved is 3,094. The Child Welfare Committee, a subcommittee of the Massachusetts Committee on Public Safety, and affiliated with the Women's Council of National Defence, has undertaken the task.

The first step is to be a nation-wide registration weighing and measuring of all children under five.* The result of this will be threefold. It will turn the attention of every mother to her child, it will enable the United States to take a reckoning of the condition of its child life, and it will bring to light an increased number of diseased children with a view to putting them in line for medical aid.

This will mean without doubt an increased burden for the already super-taxed medical man on this side of the water. And yet without direct medical interest and coöperation, the cause of child conservation is well-nigh lost. It seems worth an even heroic effort to protect our growing children from the physical defects and weaknesses that the draft has revealed.

MEASLES.

Measles is prevalent in Boston at present. It is the same old story. A comparatively few scattering cases keep the disease going during the summer when windows are open and fresh air is admitted freely into houses. As soon as cool weather comes in early autumn and people begin to close their windows, the number of cases of measles begins to increase. Cool weather is coincident with the opening of schools and this is another factor favoring the spread of the contagion. From thence on the number of cases increases with some slight variations week by week and reaches its maximum some time in the spring, and then falls suddenly with the advent of warm weather and the beginning of the summer vacations.

The mortality from measles is not high in this vicinity. Last year 102 deaths were reported from measles, practically all due to some form of pneumonia, which is the usual cause of death when death immediately follows an attack of measles. But these represent by no means the number of deaths during the year which really should be credited to measles. Measles favors infection with tuberculosis. It also causes inflammation of the kidneys and other internal organs, producing Bright's disease and other chronic diseases, which, like tuberculosis, may not cause death until years afterward when the casual relation of the condition to measles may not even be suspected.

The spread of measles is favored by the fact that it is most contagious before the eruption appears, before those in contact with the sick person really know that he has measles. The infective agent of measles is contained in the secretion from the mouth, nose and possibly eyes of cases of measles and for all practical purposes may be considered to have disappeared after the eye-watering, sniffing, coughing stage of the disease is over. This stage is usually over by the time the eruption is on the wane. On the other hand, the infective agent of measles is very fragile. It must be transferred to another person through his nose or mouth in a comparatively fresh state in order to reproduce the disease. A slight drying or exposure to fresh air and sunshine for a brief period is sufficient to destroy the infective agent or at least so dilute the infectious material that it is not dangerous.

The avoidance of measles is therefore practically a matter of cleanliness, of real cleanliness as distinguished from conventional cleanliness. It must not be deferred until after it is known that the patient has the measles. It must be already in practice while it is thought that the child is coming down with a "cold."

There is but one practical way to stop the spread of any contagious disease and that is to regard any symptoms of sickness as a contagious disease until proved otherwise and to regard as poisonous the bodily secretions of any such persons or any handkerchiefs, bedding or clothing contaminated therewith. An epidemic of measles can be prevented or, if started, can be checked, whether in a family, a children's institution or a camp, by taking daily temperatures of every susceptible individual and immediately isolating that individual and safeguarding his bodily secretions until it is certain that the case is not contagious.

The old-fashioned idea that a case must be kept warm is absolutely sound. Practice has amply proved that any exposure to a chilling of the surface of the body in a case of measles is dangerous. In an unavoidable transfer of a case of measles from one place to another the patient must be amply protected against chilling. A child ought to be put to bed as soon as there is any reason to suspect measles and kept there until after the rash has entirely disappeared and the temperature remains permanently normal. Keeping a patient warm does not mean, however, that he should be suffocated. The room should be carefully ventilated. A persistent cough or loss of flesh after measles calls for an examination of the lungs sufficiently thor-

ough to determine whether or not there be tuberculosis. As a routine proceeding, an examination should be made during convalescence to determine the condition of the kidneys and any abnormality should receive appropriate treatment at once.

NOTICE TO PHYSICIANS.

There is at present in progress a nation-wide movement in the interest of conservation of child life. In this movement the City of Boston is called, not only by public sentiment but directly by both Federal and state organizations, to play a creditable part.

The records of the Boston Health Department show that for many years there has been a steady decrease in deaths under five years of age. There has also been a steady decrease in the proportion of deaths under one year to total deaths, namely, from 26.66 in 1872 to 15.41 in 1917. The stillborn rate has also been tending steadily to decrease and stood last year the lowest in the history of the department. An analysis of the records of this department indicate that this reduction in infant mortality has been chiefly due to better infant care, especially in the matter of feeding.

When we come to the so-called "diseases of early infancy," according to the International Classification, comprising "premature birth," "congenital debility," "injuries at birth," and other similar causes of death, we find that there has been practically no decrease since the records of this department permit of conclusions in this matter.

Forty-two per cent of the deaths of infants in Boston (under one year) occur before they are a month old. Twenty-nine per cent occur before they are a week old, 15 per cent occur before they are twenty-four hours old.

Progress in child conservation, therefore, brings us squarely up against the problem of reducing the number of deaths of infants occurring within these periods, a problem which, of course, involves the prevention of abnormal foetal development, prematurity from any cause, and accidents at birth.

Physicians are therefore earnestly requested to use every endeavor to bring to the attention of expectant mothers among their patients the great danger caused by neglect and inattention to their prenatal state. It is in this way the great percentage may be reduced and physicians and mothers are the persons

to bring it about. Keep constantly in your mind this fact, that of all deaths of infants under one year of age that occur yearly in this city over 40 per cent occur before they are a month old and of causes due to "diseases of early infancy."

FLY POISON.

AVOID PREPARATIONS WHICH CONTAIN ARSENIC OR OTHER POISONS.

In spite of effective screening and other public health measures a few flies may gain entrance into the house. For those who have not the time or the inclination to swat there has been recommended an aqueous solution of sodium salicylate sweetened with brown sugar. The proper concentration of sodium salicylate may be obtained by dissolving three teaspoonfuls of the powder in a pint of water. Experiments show that the sodium salicylate is just as efficient at midsummer temperatures as the solutions prepared from commercial poison papers. Sodium salicylate has the distinct advantage of being non-poisonous, hence its use is not attended by any danger to children.

Any ordinary thin tumbler is filled or partially filled with solution. A saucer in which is placed a blotter cut the size of the dish is put bottom up over the glass. The whole is then quickly inverted. A match placed under the edge of the glass and the container is ready for use. As the solution dries out of the saucer the liquid seal at the edge of the glass is broken and more liquid flows into the lower receptacle. Thus the paper is always kept moist.

SPRINGTIME.

1. Now is the time for planting the seeds of summer diseases.
2. If you do not feed your rats well now they will leave you.
3. To raise a good crop of flies you must give them suitable filth to live in.
4. Disease organisms introduced into pasteurized milk will grow as well if not better in it than before it is pasteurized.
5. A good way to transplant disease organisms to food is to handle it with dirty fingers or let flies crawl over it; cockroaches and water bugs may likewise be used for this purpose.
6. To encourage the growth of disease organisms in food avoid heating it. Heating disease organisms to the boiling point will kill them and even a less degree of heat may prove fatal to them.

HOUSEHOLDERS, ATTENTION.

CARE OF HOMES, ROOMS, TENEMENTS, YARDS AND ALLEYS.

If You Wish to Keep Strong and Well

Do not spit on the floor.

Do not fail to keep all of the rooms of your tenement in a cleanly condition.

Do not allow children to sleep on the floor.

Do not hesitate to allow the fresh air and sunlight to enter your apartments through open windows. Fresh air in sleeping rooms is necessary to preserve health.

Do not allow anyone to sleep in the kitchen where you cook and eat.

Do not allow members of your household to go to bed with their day clothing on.

Do not allow children to sleep in the same bed with their parents.

Do not keep a lamp burning in your sleeping rooms at night.

Do not allow garbage, grease or other refuse to remain in your tenement.

Do not have any draperies or curtains hung around the windows of your sleeping room.

Do not fail to keep your windows screened, and do not allow flies to remain in the house.

These are timely warnings. Sickness, weakness and death may follow if you do not heed them.

Keep Everything Clean.

Do not throw garbage, ashes or rubbish into the back yard, upon the sidewalk, street or cellar.

Put garbage in one barrel, ashes into a second barrel, and rubbish into a third barrel. Do not mix.

Do not fill the barrels too full, and keep tightly-fitting covers on the barrels.

Violations of these rules as to garbage and rubbish are punishable by a fine.

See that all rubbish and filth is removed from inside and outside the premises.

Conserve your strength and your energy. Do not work too long hours or too hard. To properly conduct the human system you must have rest and recreation. Wealth is not necessarily health.

SCHOOL OF PUBLIC HEALTH.

HARVARD UNIVERSITY AND THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

Summer Courses, 1918.

Owing to the great demand for trained laboratory workers, the School of Public Health of Harvard University and the Massachusetts Institute of Technology will offer the following courses during the summer of 1918.

These are designed to train physicians, college graduates and others having special qualifications for laboratory positions. In addition to the regular laboratory courses indicated other courses in public health subjects will be given.

Increase in the opportunities offered women in the field of public health laboratory work has been very marked since the beginning of the world war and all of these courses are open to women. Such training will be given during the summer months as should enable them, upon its satisfactory completion, to take positions as laboratory assistants.

The tuition charges for the summer will depend on the amount of work taken, but will in no case exceed \$150. Work will begin on June 17 and continue until September 7.

Courses Offered.

Elementary Bacteriology	\$30 00
Elementary Chemistry	30 00
Organic Chemistry	25 00
Vital Statistics	40 00
Epidemiology and Industrial Hygiene	25 00
Personal Hygiene	25 00
Municipal Sanitation	25 00
Public Health Practice	25 00
Military Hygiene	25 00
Public Health Colloquium	25 00
Preventive Medicine and Hygiene	50 00
Public Health Laboratory Methods	50 00
Wassermann, Glanders and Rabies Laboratory Work	40 00

In addition to the above, opportunity will be afforded to qualified students to do practical work in public health laboratories.

For further information address the Director, Harvard-Technology School of Public Health, Harvard Medical School, 240 Longwood avenue, Boston, Mass.

Keep the baby clean at all times and do not let it come in contact with anything unclean.

**PULMONARY TUBERCULOSIS CASES REPORTED BY
WARDS FOR JANUARY, FEBRUARY AND MARCH,
1918.**

WARDS.	January.	February.	March.
1.....	7	3	8
2.....	4	10	15
3.....	5	7	6
4.....	9	11	3
5.....	20	31	30
6.....	23	25	20
7.....	12	11	6
8.....	8	5	17
9.....	7	6	21
10.....	6	2	10
11.....	9	5	10
12.....	7	5	11
13.....	13	5	7
14.....	11	6	6
15.....	10	11	3
16.....	4	8	13
17.....	7	1	6
18.....	7	5	9
19.....		6	2
20.....	4	5	5
21.....	1	8	10
22.....	9	9	3
23.....	8	5	4
24.....		3	3
25.....	3	4	6
26.....	2	5	6
Nonresidents.....	16	11	27
Unknown.....		7	2
Totals.....	212	220	269

PULMONARY TUBERCULOSIS.

Cases Investigated by Sex, Condition, Color and Mother Nativity, January, February and March, 1918.

	January.	February.	March.
Sex:			
Male.....	93	148	101
Female.....	63	53	76
Information not obtained.....			
Totals.....	156	201	177
Conjugal condition:			
Single.....	63	91	74
Married.....	64	80	57
Widowed.....	7	12	20
Divorced.....			3
Information not obtained.....	22	18	23
Totals.....	156	201	177
Color:			
White.....	144	190	163
Chinese and black.....	8	11	14
Information not obtained.....	4		
Totals.....	156	201	177
Mother nativity:			
Boston.....	12	18	13
United States.....	23	29	21
Ireland.....	37	49	42
England, Scotland and Wales.....	10	12	4
Germany.....	8	5	5
Canada.....	16	23	14
Sweden.....	4	3	1
Italy.....	6	10	10
France.....	2		1
Russia.....	17	16	20
Other countries.....	16	17	12
Information not obtained.....	5	19	34
Totals.....	156	201	177

PULMONARY TUBERCULOSIS.

Cases Investigated by Kind of House, Sanitation, Sleeping Arrangements, Sputum Reports and Hospital, January, February and March, 1918.

	January.	February.	March.
Kind of House:			
Single.....	10	28	15
Two-apartment.....	18	24	30
Three-apartment.....	62	60	52
Four-apartment.....	27	37	20
Hotels.....	4		1
Lodging houses.....	21	32	36
Institutions.....		1	1
Basement.....			
Information not obtained.....	14	19	22
Totals.....	156	201	177
Sanitation:			
Excellent.....	4	6	2
Good.....	80	105	89
Fair.....	44	51	45
Poor.....	11	19	16
Very poor.....		1	
Information not obtained.....	17	19	25
Totals.....	156	201	177
Separate Room:			
Yes.....	85	139	107
No.....	39	33	37
Information not obtained.....	32	29	33
Totals.....	156	201	177
Separate Bed:			
Yes.....	97	149	118
No.....	30	24	25
Information not obtained.....	29	28	34
Totals.....	156	201	177
Sputum:			
Positive.....	29	35	21
Negative.....	21	12	16
Information not obtained.....	106	154	140
Totals.....	156	201	177
Hospital:			
Yes.....	34	33	38
No.....	122	168	139
Totals.....	156	201	177

PULMONARY TUBERCULOSIS.

Cases Investigated by Age Periods, January, February and March, 1918.

AGE PERIODS.	Under 5 Years.	5 to 10 Years.	10 to 15 Years.	15 to 20 Years.	20 to 25 Years.	25 to 30 Years.	30 to 35 Years.	35 to 40 Years.	40 to 45 Years.	45 to 50 Years.	50 to 55 Years.	55 to 60 Years.	60 to 65 Years.	65 to 70 Years.	70 to 75 Years.	75 to 80 Years.	80 to 85 Years.	85 to 90 Years.	Unknown.	Totals.	Grand Total.
Males.....	6	3	9	11	38	63	46	28	41	40	18	11	6	10	3	...	1	...	8	342	} 534
Females...	4	7	7	18	31	26	16	20	13	13	8	3	...	4	4	1	1	...	16	192	

CHANGE IN ENVIRONMENT.

The summer season will soon be here and with it its many accompanying dangers to the health of the baby and the adult. Great baby saving may occur in summer weather if we will but take advantage of many of the natural advantages that lie about us to properly safeguard the infant. Excessive heat, of course, is responsible in many ways, both directly and indirectly, for the summer toll of infants. This must be avoided, if possible, by adopting precautions that will protect the infant.

The grown-up who moves away to the beach or the country, whether for a short or long period, must bear in mind that he has changed his environment and there may be many things in that locality that are not conducive to health. Before making such a move these many things should be investigated, and this applies whether you are to rent a cottage or to live in a hotel.

For both baby and adult impure milk or polluted water are often the cause of illness and death.

Your cottage or your hotel should be provided with a pure water and milk supply similar in its purity to what you obtain at home. There is no benefit in the rest or recreation you secure if at the end of the season serious sickness creeps in as a result of improper sanitary conditions in and about your summer abode. For the personal safety of everyone it is for his advantage to search well before choosing his summer recreation place. There are many danger spots, but to the credit of some of our neighboring states may it be said they are doing everything possible to improve the surroundings of many of the hotels and cottages within their confines.

The hot summer weather also is often attended with many

deaths due to exposure or fatigue which might be avoided. During all periods of the year we should care for ourselves by proper living, but the rising temperature brings with it a condition to which often we do not try to adjust ourselves.

There are a few things that each individual should do for his personal welfare and for his personal good. Bathe often, dress lightly, avoid alcoholic beverages of all kinds, avoid excesses, eat sparingly of meat, encourage breast-feeding in infants. Do not worry, overwork or overeat, overheat or exhaust yourself in any way. When the day is hot, rest as much as possible in a cool place; get plenty of fresh air and sunshine but avoid prolonged exposure to the sun on hot days. Drink plenty of water, but abstain from ice water, especially when hot or exhausted.

DANGEROUS PESTS.

Rats and flies, bugs and vermin, fleas and parasites of different harmful types begin to breed in the spring when the days are consistently and consecutively warm and will continue to breed and multiply until well into the autumn.

In order to breed, these unwelcome visitors must have food, and what they eat is only what we give them. And it is in the wastes and refuse, garbage and manure piles, sewers and privies that many of these bugs breed and flourish. There are of course many that live on the body of both man and animals, but even they are removed if the dirt is removed from the hair, skin or clothing.

To encourage the breeding of these harmful parasites is to invite disease into the body of living human beings. These are carriers of disease and should have no place in our household or in our community.

Breeding places should be discouraged, manure and refuse piles removed, yards, cellars, passageways cleaned, garbage and rubbish barrels kept covered, and premises and bodies kept washed and clean. Burn, bury or cart away all refuse. Cleanliness in everything and an individual or concerted attempt to rid the community or household of these pests will be a great saving both economically and physically.

There is danger in the use of the common roller towel, the common drinking cup and the insanitary barber shop.

REPORT OF THE HEALTH UNIT FOR THE MONTH OF APRIL, 1918.

Health Department.

Visits made by medical inspector:

Contagious	35
Tuberculosis	2
Ophthalmia	2
Miscellaneous	28
Total	<u>67</u>

Cases visited by nurses:

Medical	159
Babies	92
Total	<u>251</u>

Defective sanitary conditions found in tenement houses,	8
Calls by district physician from Boston Dispensary .	129

Instructive District Nursing Association.

Visits made by nurses	652
---------------------------------	-----

Baby Hygiene Association.

Total number of babies cared for	179
New babies admitted	28
Babies readmitted	2
Conferences held	4
Total conference attendance	287
Home visits by nurses	335

Associated and Hebrew Federated Charities.

Cases investigated and assisted	12
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Consumptives' Hospital Department.

Calls by nurses in district	634
---------------------------------------	-----

SUMMARY OF VITAL STATISTICS.

There were 1,163 deaths reported in the month of April, against 1,102 in the corresponding period last year, a death rate of 18.04 against 17.36.

Reported deaths of nonresidents numbered 165, against 165 last year.

Of deaths from reportable diseases the principal decreases and the principal increases were:

Increases:

Cerebro-spinal meningitis	9
Measles	16
Whooping cough	20
Tuberculosis (pulmonary)	28

Other important differences were:

Decreases:

Cancer	28
Erysipelas	5

The principal increases were:

Pneumonia	20
Heart disease and nephritis	53

There were 2 more deaths under 1 year, 14 more under 2 years and 37 more under 5 years.

NUMBER OF CASES AND DEATHS FROM COMMUNICABLE DISEASES FOR APRIL.

	CASES.			DEATHS.		
	1918.		1917.	1918.		1917.
	Total.	Non-resident.	Total.	Total.	Non-resident.	Total.
Diphtheria	288	75	321	25	7	21
Scarlet fever	131	31	166	1		3
Measles	1,423	24	881	24	4	8
Typhoid fever	5	1	16			
Whooping cough	254	6	22	21	2	1
Pulmonary tuberculosis	231	15	227	120	5	92

MORTALITY FOR APRIL AND CORRESPONDING MONTH IN 1917.

	1918.	1917.
Total deaths	1,163	1,102
Nonresidents	165	165
Rate	18.04	17.36
Corrected rate (nonresidents deducted)	15.48	14.76
Deaths under 1 year	171	169
Deaths under 2 years	229	215
Deaths under 5 years	280	243
Deaths over 60 years	335	366

CAUSES OF DEATH.

	Totals, 1918.	Non- residents, 1918.	Totals, 1917.
Cerebro-spinal meningitis	12	1	3
Diphtheria	25	7	21
Measles	24	4	8
Scarlet fever	1	—	3
Tuberculosis (pulmonary)	120	5	92
Tuberculosis (other forms)	18	6	11
Whooping cough	21	2	1
Accidental and violent	63	12	61
Heart disease, endocarditis, pericarditis and nephritis,	232	21	179
Bronchitis	6	—	11
Cancer	66	13	94
Diarrhea and enteritis (under 2 years)	12	4	15
Diarrhea and enteritis (2 years and over)	3	1	5
Erysipelas	13	2	18
Meningitis and encephalitis	4	1	2
Old age	2	—	6
Pellagra	—	—	1
Pneumonia	203	22	183
Premature birth	30	6	23
Puerperal diseases	18	6	14
Rheumatism	3	1	4
Syphilis	10	2	5
Influenza	9	—	8
Other causes	268	49	334

**The Following is a Summary of the Work Done by the
Different Divisions in the Department for April,
1918.**

CENTRAL DIVISION.

Prosecutions authorized	23
Stable hearing	1
Stable license revoked	1
Premises ordered vacated	8
Miscellaneous orders	9
Applications lying-in hospitals approved	2
Forcible removals ordered	4
Resignation	1
Appointments	7
Conferences	4
Leave of absence granted	1
Hearings	5
Cemetery permit	1
Dump applications	3
Public lodging houses certified	10
Orders rescinded	3
Transfers	3

Licenses — Permits.

Undertakers appointed, annual	201
Undertaker's suspension raised	1
Licenses to peddle fruit and vegetables	103
Grease licenses granted	62
Grease licenses renewed	2
Manicure — Massage	6
Dump permits	3
Special permit	1
Hen permits	1,209
Numbers assigned	115
Sundry licenses	1
Vehicles inspected and approved	390
License revoked	1
Offensive trade licensed	1
Milk licenses	1,250

MEDICAL DIVISION.

Communicable Diseases.

Number of visits by medical inspectors	1,491
Antitoxin given	55
Deaths investigated	34
Cases brought to Boston for treatment	202
Vaccinations	80
Vaccination certificates	9
Antityphoid vaccine administered	1
Forcible removal recommended	1

Public Health Nursing.

Communicable disease visits	3,557
Number of revisits (infants)	4,660
Number of new babies visited	1,203
Total visits by nurses	<u>9,420</u>

BACTERIOLOGICAL LABORATORY.

Examinations for Diagnosis and Release.

Diphtheria	1,501
Tuberculosis	485
Typhoid	90
Gonorrhea	570
Gonorrheal ophthalmia	26
Syphilis	826
T. B. Comp. Fix. Test (special examinations)	826
Other examinations *	138
Bacteriological milk examinations	563
Bacteriological ice cream examinations	14

* Chow-chow for colon, 1; Examination of rats, 24; Genito-Urinary Tuberculosis, 13.

FOOD INSPECTION.

Live Stock Inspected at Brighton Abattoir.

Cattle inspected	112
Calves inspected	10,499
Swine inspected	3,099
Animals condemned, whole	15
Parts condemned	131
Stores inspected	1,215
Court cases	12
Guilty	12
Appeals	6
Fines	\$885

MILK INSPECTION.

(Examinations as to Statute Requirements.)

Samples examined:	
Chemical examinations of milk	1,451
Bacteriological examinations of milk	562
Chemical examinations of vinegar	105
Chemical examinations of butter and cheese	26
Chemical examinations of ice cream	3
Miscellaneous examinations	13
Number of court cases	65
Fines	\$885

Inspection of Provisions — Articles Condemned.

Meat and Fish:		Meat and Fish:	
Poultry	269 pounds	Spawn	10 pounds
Veal	132 pounds	Cod	10 pounds
Beef	252 pounds	Miscellaneous:	
Corned shoulder	172 pounds	Apples	29 barrels
Corned beef	81 pounds	Cabbage	37 barrels
Lamb	50 pounds	Kale	10 pounds
Liver	10 pounds	Potatoes	4 bushels
Pigs' feet	95 pounds	Beets	6 bushels
Halibut	220 pounds	Onions	588 pounds
		Sweetbreads	39 pounds

SANITARY INSPECTION.

New reports	2,603
New tenement house reports	32
Legal notices recommended	797
Reinspections	6,272
Nuisances reported	4,737
Complaints investigated	593
Court cases	11
Fines	\$85

MORBIDITY AND MORTALITY.

(4 Months.)

	1918.	1917.
Total deaths	4,939	4,876
Nonresident deaths	699	664
Deaths under 1 year of age	731	681

	1918.	1917.
Pneumonia	925	863
Cancer	305	321
Heart disease and nephritis	925	932
Diarrhea and enteritis under 2 years	52	53

DEATHS FROM COMMUNICABLE DISEASES.
(4 Months.)

	1918.	1917.	1918. Non- residents.
Diphtheria	102	89	37
Scarlet fever	17	20	5
Measles	64	13	10
Typhoid fever	4	6	2
Whooping cough	52	5	3
Tuberculosis	441	405	31

CASES OF COMMUNICABLE DISEASES REPORTED.
(4 Months.)

	1918.	1917.	1918. Non- residents.
Diphtheria	1,392	1,260	239
Scarlet fever	599	659	129
Measles	3,434	2,429	53
Typhoid fever	19	41	2
Whooping cough	957	73	7
Tuberculosis	914	859	69

MONTHLY METEOROLOGICAL SUMMARY,
APRIL.

ATMOSPHERIC PRESSURE.

(Reduced to sea level; inches and hundredths.)

Mean, 30.15; highest, 30.60; date, 7; lowest, 29.55; date, 22.

TEMPERATURE.

Highest, 76; date, 1; lowest, 31; date, 5; greatest daily range, 31; date, 1; least daily range, 3; date, 11; normal for month, 45.3°.

PRECIPITATION.

Total this month, 3.08; snowfall, 4.2; greatest precipitation in 24 hours, 1.50; date, 21; snow on the ground at end of month, T.*; normal for this month, 0.

WIND.

Prevailing direction, east; total movement, 7,700 miles; average hourly velocity, 10.7; maximum velocity (for five minutes), 35 miles per hour from northwest, on 11th.

WEATHER.

Number of days clear, 11; partly cloudy, 9; cloudy, 0; on which .01 inch or more of precipitation occurred, 8.

MISCELLANEOUS PHENOMENA (Dates of).

Auroras, 5; halos: solar, 10, 16, 17, 27; lunar, 0; hail, 0; sleet, 11, 12; fog, 29, 30; thunderstorm, 0; frost: light, —; heavy, —; killing, —.

* T. indicates trace of precipitation.

CARE BEFORE BIRTH

BIRTH IS NOT THE BEGINNING OF
LIFE—BABIES ARE ALIVE AND
CAN BE SERIOUSLY INJURED
BEFORE BIRTH.



A Healthy Happy Mother **Makes** A Healthy Happy Baby

A MOTHER AWAITING THE BIRTH OF HER BABY
NEEDS

GOOD FOOD PLENTY OF REST FRESH AIR
LIGHT EXERCISE A CONTENTED MIND

IN THE UNITED STATES (Registration Area) in 1912
38% (more than one third) of all the babies dying
under 1 year and 73% (nearly three quarters) of
all the babies dying under 1 month

DIED BECAUSE OF CONDITIONS BEFORE BIRTH

INFANT WELFARE WORK HAS SAVED THOUSANDS OF
BABIES BUT OUR DUTY TO THE BABY BEGINS
BEFORE BIRTH

MAY, 1918

MONTHLY BULLETIN
HEALTH DEPARTMENT
OF THE
CITY OF BOSTON



FRANCIS X. MAHONEY, M.D., *Commissioner*

STATISTICS FOR 1917.

Population		772,370		
Births	19,856	Birth rate	25.7	
Deaths	12,721	Death rate	16.47	
Of these total deaths 15 per cent were nonresidents.				

BOSTON
HEALTH DEPARTMENT
CITY HALL ANNEX
1918

HEALTH DEPARTMENT.

(Tel. Fort Hill 5100.)

Commissioner of Health.

Secretary	1109 City Hall Annex.
Publications	1109 City Hall Annex.
Licenses	1109 City Hall Annex.
Medical Division	1107 City Hall Annex.
Communicable Diseases	1107 City Hall Annex.
Child Hygiene	1108 City Hall Annex.
Health Unit	17 Blossom street.
Vaccination Station	17 Blossom street.
Detention Hospital	Southampton street.
Occupational Clinic	17 Blossom street.
Bacteriological Laboratory	1101 City Hall Annex.
Examination of Cultures	1101 City Hall Annex.
Wassermann Tests	1101 City Hall Annex.
Food Inspection Division	1110 City Hall Annex.
Inspection of Foodstuffs	1110 City Hall Annex.
Examination of Milk and Vinegar	1104 City Hall Annex.
Inspection of Dairies	1102 City Hall Annex.
Brighton Abattoir	Market street, Brighton.
Sanitary Inspection Division	1111 City Hall Annex.
Abatement of Nuisances	1111 City Hall Annex.
Examination of Gas Fitters	1111 City Hall Annex.
Vital Statistics Records and Accounts	1112 City Hall Annex.
Permits for Burial	1112 City Hall Annex.
Superintendent of Peddlers	27 North Grove street.

OFFICE HOURS.

The Health Department will be open from 9 a. m. to 10 p. m., except Saturdays, when the hours will be from 9 a. m. to 1 p. m. and from 5 p. m. to 10 p. m. Sundays and holidays, from 10 a. m. to 12 m. and from 5 p. m. to 10 p. m., for the reporting of cases of communicable diseases, issuing of burial permits, the distribution of antitoxins and vaccines, and the receiving of cultures and widals.

FREE WASSERMANN TESTS.

The Bacteriological Laboratory is prepared to examine free of expense blood specimens by the Wassermann test for syphilis. Tests are made each Tuesday, Wednesday, Thursday and Friday. Blood is drawn from patients in the laboratory each Monday, Tuesday, Wednesday and Thursday from 2 to 4 p. m.

MONTHLY BULLETIN

OF THE

HEALTH DEPARTMENT OF THE CITY OF BOSTON.

FRANCIS X. MAHONEY, M. D., *Commissioner of Health.*

All communications relating to this publication should be addressed to Editor, BULLETIN
OF THE HEALTH DEPARTMENT, BOSTON.

VOL. 7.

BOSTON, MAY, 1918.

No. 5

Do not Lower Your Resistance to Disease.

PHYSICAL FATIGUE.

The present time is one of great activity on the part of the people in this country, not only those who are directly engaged in war, but those who are participating in some measure, whether at home, in the field, or in the munitions or industrial plants furnishing sinews for the proper conduct of the war. Many of our young men and women, imbued with the idea of large wages, have forgotten that they cannot burn the candle at both ends. There is bound to be a reckoning if care is not exercised. Long hours, with hard work, split time and uneven schedules, are often productive of irregular sleep and meals and are not conducive to good health.

Before the war fatigue and its relation to health was the subject of many investigations throughout the country. The conclusion was that an individual could not work long hours and maintain his maximum efficiency, and that in the long run the practice was unfavorable to both employee and employer. At the outbreak of the war the need for men and munitions became so imperative that the health of the worker was a secondary consideration. It is necessary that the output of all plants be as constant and large as possible, but maximum production cannot be maintained if the health of the worker is neglected. Methods devised in many places to speed up the output of industries are bound to have a reaction not only on the output but on the individual. Physical fatigue, from the standpoint of preventive medicine, must be given careful and thoughtful consideration as one of the important factors tending to lower blood and tissue resistance to infectious diseases and especially to coccus infections so often associated.

With overcrowding, close contact, bad ventilation and catarrhal infections accompanied by coughing and sneezing, individuals vary in susceptibility to such infections, and susceptibility seems to vary from time to time in the same individual. Age, exposure, fatigue, mental depression, digestive disturbances, lack of food and unsuitable clothing are important factors in the infection and spread of disease.

As rules and regulations must be observed for the proper conduct of business, so must similar methods be followed for the upkeep of health.

Avoid overeating or drinking; do not keep late hours; plenty of sleep is very necessary for the health of both mind and body; let alcohol and tobacco alone; do not indulge in too much tea or coffee; eat the right kind of food — a little meat in hot weather; live and sleep in fresh air; "Oxygen is the fuel of the vital fires of life"; learn to relax; avoid needless worry and undue excitement; wear proper clothing; bathe frequently; avoid excess of sugar, salt and highly seasoned dishes; admit the sunshine to your homes; avoid the high pressure life and have periods of simple and wholesome recreation; drink plenty of pure water; take regular, moderate, out-of-doors exercise; keep the teeth clean and in good condition, and stand, sit and walk erect.

"America must not forget that the workers at home are the sustaining line of her defence. The army cannot exist a day without the support of industrial forces. Only by safeguarding their health and strength in war time can the nation supply its needs."

MAKING THE SUN WORK.

Vacation days, or holidays, states "Good Health Magazine," or any day when we can, let us take a sun bath; our frazzled nerves, our sleeplessness, that neuralgic pain and rheumatic backache — all the tiresome, mean little feelings will gradually fade away. There is a saying that "the little foxes spoil the vines"; what we need to do is to get right after the beginning of disease. If we take small doses of a natural healing remedy — a little sun bath — we shall not need large doses of heliotherapy.

However, one needs to be cautious in working with any powerful agent, or harm instead of good may be done. We cannot take sun baths, hit or miss; there are certain rules to observe if we want to get the greatest possible benefit from them. Perhaps we would better call them sun-air baths, because that is what they really are — what they have been from ancient times.

The Sun's Energy.

We do not get all the energy necessary for the body's health from assimilated food. The body constantly receives energy directly from the atmosphere. We receive heat waves from the sun and from all objects that surround us. We receive light waves from the sun directly, or reflected as diffused daylight. Electrical currents and discharges from the outside sources penetrate our bodies constantly. All these energies received from the outside play an important part in the physiology of the body.

The Sun Warms and Protects the Body.

The heat rays assist the body to maintain its temperature with a smaller expense of its own fuel. In the tropics a man can do a reasonable amount of work with a daily intake of only 2,000 to 2,500 calories of food a day. In a cold climate, a man working out of doors needs 4,000 to 5,000 calories a day. In an absolutely low temperature, man could not exist; his body could not produce heat enough to balance the loss by radiation.

The bacteria of the atmosphere, in water or in soil, are killed when acted upon by the sunlight. The air we breathe is thus continually purified. In this way, also, polluted water exposed to sun rays — that is, in rivers or lakes — is freed from typhoid and other bacteria.

The ozone, so stimulating to the organism, is produced by the action of the sun rays.

Healing Power of the Sun.

As to the direct influence of sunshine on the human body, physicians agree that sunshine maintains health and has a most beneficial action in convalescence, wasting diseases, neurasthenia, anemia, etc.

Scientists who have gained world-wide reputation by their studies and their remarkable cures emphasize the two following rules: The exposure of the sun rays should be direct, and it should be total.

It should be *direct*, because any interposed material absorbs the most valuable of the sun's rays. All clothing, even the thinnest gauze, is objectionable for the same reason, but also because it interferes with the circulation of the air to the skin.

The exposure of the body should be *total*, whenever possible, as only in this way have the best results been obtained. (The head should always be protected.)

Sun Bath Training.

Another limitation to the rule of total exposure is that patients, during the first three or four days, should be *trained* to the full sun bath. Patients should expose only the legs the first day, the legs and thighs the second day, the third day the abdomen, and the fourth day a full exposure. The duration should also be increased gradually, according to the general condition of the patient.

What the Sun Heals.

The sun bath is applicable in all forms of disordered nutrition, especially in obesity, diabetes and when there is uric acid condition.

The dry, sallow, leathery skin of the chronic dyspeptic rapidly becomes moist, lively and velvety as the result of an hour's daily sunning.

Neurasthenia, in all its forms, is materially influenced for good, the quality of the blood is improved and all the tissue-building and energy-storing processes are stimulated. In anemia, the blood-making process is encouraged, poisons are thrown off, and the disturbance of the circulation of the blood, which results in chronic organic congestion, is rapidly relieved.

In exophthalmic goitre the sun bath is of great value when employed with proper precautions. Care must be taken to guard the heart during hot baths of all sorts by placing an ice-bag or cold coil over the region of the heart.

In Bright's disease, in hardening of the liver and in all other forms of organic degeneration, patients often receive surprising benefit from this simple measure, when it is employed according to individual needs.

In such affections great care must be taken in cooling the patient after the bath. It is well to rub the body with a cold wet towel or a wet sheet; this will tone the skin.

In chronic rheumatism, rheumatic gout and even in tuberculous joint disease, the sun bath often accomplishes wonders; it always relieves and sometimes aids the patient to recover in cases which seemed quite hopeless.

Doctor Winternitz has called attention to the great benefit derived from exposing the skin to the sun in various skin diseases, especially eczema. Psoriasis also yields to this method, and cases of chronic acne of the face and shoulders.

It will be seen that scientific sun treatments can only be utilized to the best advantage when prescribed and directed by an experienced physician. We advocate living out in the sun-

shine and fresh air all that is possible; that is conducive to health and happiness. The sun and air are God's free gifts to mankind, and we should at all times use them.

Everyday Sun=Air Baths.

We can personally manage sun-healing treatments for our petty ailments by observing as nearly as possible the important rules mentioned, especially the one about gradually accustoming the naked body to the air and sun bath and taking short baths. We must also remember that sunstroke is possible in hot weather even if we are not where the sun's rays directly strike the body.

Of late it is the fashion to go hatless all summer, if not throughout the year. This custom is not without danger in hot weather. To expose the unprotected head to the sun's rays for hours is likely to cause congestion, bad headaches and all the effects of a near sunstroke. In the tropics, the head is always protected and no one ventures to go out at high noon.

Suppose you have any of the muscle or neuralgic pains in your body; suppose you work or stay much of your time in rooms where you get little sunshine; then vacation time is your opportunity for personally conducting sun-air bath treatments. If you take them on the beach, be sure you have a stout, dark umbrella or broad hat to protect your head.

In the woods or garden, lie with your head sheltered by a tree or bush. Carefully select the best spot for your sun-air bath. And when you have given one part of your body a short sun-air bath, turn round. Your heels and your back need the treatment just as much as your toes and your abdomen.

You will find yourself drowsy in taking the sun-air bath, but a very short nap is better than a longer sleep.

A sun bath taken regularly every day will take you a long way on the road to health.

PREVENTION OF GASTRIC ULCERS.

Teeth an Important Factor.

Ulcers of the stomach and upper intestine are a frequent cause of death, more frequent than mortality statistics indicate. They are a common cause of invalidism and misery, more common than is generally appreciated. These statements are equally true of inflammatory conditions of the gall bladder associated with gall stones. Furthermore, malignant cancers often begin at the site of a chronic gastric ulcer or an inflamed gall bladder.

It has long been a matter of observation that cancers are likely to start in localities which have been the site of persistent irritation.

The cause of gastric ulcers and gall stones has been a mystery, but of late sufficient evidence has accumulated to show that in many if not all cases of gall stones the concretion or "stone" starts forming because of an inflammation of the gall bladder due to an infection of some sort which has been carried there from a disease process in some other part of the body. So also we have learned that ulcers of the stomach likewise may start from an infection which has been transplanted from some other locality, just as in a case of a septic sore throat the infection may spread and start up another inflammation in the heart or kidney or in the joints. Furthermore, we have now learned that decayed teeth and associated mouth infections may be the original focus of infection which gives rise to stomach ulcers and infections of the gall bladder, just as such a mouth condition may give rise to secondary infections in other internal organs or in the joints. Decayed teeth are not the only cause of ulcerations of the digestive tract, but evidence is accumulating to indicate that they are a frequent cause.

We have been slow in waking up to the dangers of diseased teeth. The person does not see them and their relation to the other disease conditions to which they give rise is usually obscure. A person who would be greatly disturbed by a chronic ulcer on his leg would think nothing of a similar pathological process going on in a tooth in his mouth, a much more dangerous locality so far as possibilities of systemic infection are concerned. Such systemic infections are constantly taking place. A decaying tooth facilitates the entrance into the body of other organisms than those directly associated with the tooth decay itself. Overtaxed by the poisonous material which rotten teeth pass up to them, the tonsils, the scavengers of the throat, become enlarged and finally themselves diseased. Glands of the neck unable to handle the load of tubercle bacilli handed to them through a rotten tooth become themselves tuberculous and the focus of further tubercular infection. Or the dissemination of infection through diseased teeth may give rise to infection of more distant internal organs of the character already referred to. An unsuspected chronic streptococcic infection in the jaw below a dead tooth often proves to be the actual cause of a crippling rheumatism or of arterial degeneration and heart disease. Diseased teeth are not merely the cause of malnutrition, misery and invalidism; they are

both indirectly and directly a frequent cause of death, as any examination of the death certificates which pass through this department will show.

The mouth and teeth are an important part of the digestive apparatus. Swallowing food improperly masticated may slowly but will none the less surely lead to imperfect digestion, mal-assimilation and irritation and finally degeneration of blood vessels and other internal organs. An effective chewing apparatus is a big factor in longevity. Furthermore, decaying or otherwise diseased teeth always mean the constant absorption of dangerous organisms and poisons into the system. In attempting to treat chronic bodily ailments the condition of the teeth should be the first thing instead of the last thing to be thought of. The removal of diseased tonsils or diseased glands of the neck is bound to give disappointing results if diseased teeth are left in the mouth. Medical or surgical treatment of diseases of the digestive tract are doomed to failure if the direct or indirect cause is in the mouth. The only chance of relieving a "rheumatic" joint and preventing permanent disability may lie in the removal of a bacteria factory under a dead tooth.

There are various plausible explanations why teeth decay or become otherwise diseased and why decayed teeth are so common here and unusual in some other countries. As a matter of fact, however, teeth do decay here under our necessary conditions of living and these explanations as to cause have not yet offered us a practical means of preventing tooth decay. To preserve our teeth we are practically dependent on regular attention to the cleanliness of the mouth and teeth and the extraction, treatment or artificial repair of a tooth as soon as it shows signs of disease. To prevent decayed teeth we must start early in life. The trouble usually begins with the first teeth, from which the permanent teeth are infected. Frequently, on this account, the first permanent molar is already diseased by the time of its eruption. The preservation of the permanent teeth means therefore primarily the maintenance of a clean, healthy condition of the first teeth.

Milk is a valuable summer food for children and adults. Give the child at least a quart of milk a day. It will help it grow up strong and well. Do not attempt to save on milk, the best food for children; economize on other things if you must.

ACIDOSIS.

In 1915 there occurred in the Brighton district of Boston a number of deaths of young children which were ascribed to acidosis in the death certificates. In some of these cases a condition of acidosis was actually demonstrated. In others it was inferred from the symptoms. The other symptoms were those of gastric disturbance and irritation occurring in children previously in apparently good health. Autopsies were secured in three cases, but the findings did not justify definite conclusions as to the fundamental nature of the illness. About the same time, there was reported in another locality in New England a series of deaths in children, preceded by acidosis and apparently conforming to the general symptoms of the Boston cases. Since that time, acidosis has appeared not infrequently as a cause of death in the death certificates filed at this department in cases of young children who have died after a brief illness in which gastric irritation and acidosis have comprised the most prominent symptoms. The term acidosis has thus come locally to signify both to the medical profession and to the public a new and fatal child's disease. That such an adaptation of the term is justifiable would appear very doubtful, and in this connection there are some very suggestive references to acidosis to be found in current medical literature.

The term acidosis properly used means nothing more than the appearance in the blood of volatile fatty acids, diacetic acid, beta-oxybutyric acid, acetone. Under normal conditions these substances, or the substances to which they may give rise, are completely oxidized into carbon dioxide, exhaled by the lungs, and water.

Various conditions seem capable of causing the appearance of these abnormal acids in the blood, notably diabetes, a disease which is characterized by inability of the body to assimilate properly carbo-hydrates, the sugars and starches of the food. Acidosis to a greater or less degree may follow various other conditions such as strong emotions, the administration of anæsthetics, derangements of the thyroid gland, strychnine poisoning and starvation. Children are more susceptible to acidosis than adults. It is stated,* that if a child be deprived of food containing carbo-hydrates for thirty-six hours, in most instances, a condition of acidosis is produced and diacetic acid will appear in the urine. The more emotional and frightened they are the greater the degree of acidosis, and death may ensue within twenty-four or thirty-six hours. But acidosis

* W. A. Lincoln, M. D., "Annals of Surgery," Vol. LXV., No. 2, p. 135, 1917.

does not necessarily mean a fatal termination. To a certain degree it is probably not an uncommon condition which usually disappears with the disappearance of the cause. It is a matter of observation that acetone commonly appears in the breath of persons suffering from protracted seasickness, but has never been regarded as a dangerous symptom in a healthy person.

It is assumed that the alarming symptoms which are likely to lead to the recognition of a condition of acidosis are due to the withdrawal from the blood and tissues of their natural alkalis in connection with a process of neutralization of the abnormal fatty acids in the circulation. If this be so, it would seem logical to try to relieve these symptoms by increasing the alkalis in the bodily tissues. It is customary to administer sodium bicarbonate for this purpose and the abatement of alarming symptoms that sometimes promptly follows would seem to justify this practice. Whether given by mouth, by rectum, hypodermically or intravenously, sodium bicarbonate gives evidence of being capable of acting as an injurious irritant, probably as suggested, because of its partial transformation into sodium carbonate. When given by mouth, there is also to be considered the possible results of the production of large amounts of CO_2 gas in the stomach and intestines. In fact, it is a serious question whether the liberal and prolonged administration of sodium bicarbonate may not have actually brought about a fatal termination in some cases of so-called "acidosis."

While the judicious administration of sodium bicarbonate is a rational procedure in the treatment of acidosis, it cannot of course be expected to be of permanent value unless the underlying cause of the acidosis is removed or has ceased to exist. In a given case it may be impossible to discover the cause or remove it if discovered, but in cases of acidosis occurring in children there is one possible cause which should not be overlooked, the deprivation of the child of carbo-hydrates. According to Doctor Lincoln, already quoted above, when the bodily supply of carbo-hydrates fails, "the organism calls upon its reserve store of fats and proteids, but, more especially, fats. A certain amount of carbo-hydrate is necessary to the complete oxidation of fats which are ordinarily oxidized to CO_2 and would be eliminated from the lungs without difficulty. But, in the absence of carbo-hydrates, the process falls short, . . . and thus some of the fatty acids make their appearance in the blood, such as acetone, diacetic acid and oxybutric acid." The withholding of food from a child or perhaps the modification of its diet, prompted by a slight gastric upset, may result

in such deprivation of necessary carbo-hydrates as to lead to a condition of acidosis and then the too liberal administration of sodium bicarbonate may do the rest. Doctor Lincoln's article is concerned primarily with the occurrence of acidosis after surgical operations, and he cites two cases in children in which he attributes its occurrence to "excessive zeal" in withholding food. He recommends administering carbo-hydrates in the form of a 5 to 10 per cent solution of glucose, and sodium bicarbonate in the proportion of one to two drachms to the quart.

SEWAGE DISPOSAL ON DAIRY FARMS.

Most of the diseases which may be carried by milk are due to contamination of that product by human agency. Typhoid, dysentery, scarlet fever and diphtheria are of human origin. Typhoid and dysentery are spread originally by contamination by human excreta; the others are spread originally by discharges from the nasal and throat passages; consequently when these diseases are conveyed through milk, it simply means that the milk has had added to it the excreta or discharges from the body of a person sick with one of these diseases or a carrier of one of them. As a go-between, the house fly, which hatches in filth and feeds on the food we eat, is a most dangerous insect enemy. The washing of excreta into water supplies, through the soil or on account of poor well curbing or other surface conditions, is an important means of spreading such diseases as typhoid fever and dysentery. The handling of milk by unclean persons is also a source of danger. The remedy for these conditions is the proper disposal of human excreta so that there can be no danger of such contamination through the agency of flies, water supply or human beings.

Proper sewage disposal on dairy farms is a protection not only to the consumer of milk but is of special importance in stopping the spread of epidemic disease in the dairyman's own family. A typhoid case in a family will spread to other members of the same family unless great care is taken in properly disposing of the excreta from the patient.

Dirty and wet yards, cellars and areas encourage the breeding of flies and mosquitoes, carriers of disease.

Prepare for the usual extreme heat of July.

ATTENTION VACATIONISTS

**TYPHOID FEVER HAS OFTEN BEEN
TERMED A "VACATION DISEASE"**

Many cases and deaths occur in the summer
and autumn after people have returned
from vacations

They can be prevented by simple measures

**CLEANLINESS AND ANTI-TYPHOID
INOCULATION ARE THE WEAPONS**

Do not bring typhoid back with you into a
city that has the lowest death rate of
the big cities in the country

Anti-typhoid inoculation may be given by
your physician or free of expense by the
Health Department

This is a safeguard for yourself, the com=
munity and the entire city

**PROTECT YOURSELF BEFORE YOU START
ON WEEK-END TRIPS OR ON
REGULAR VACATIONS**

RECENT MASSACHUSETTS LEGISLATION.

Chapter 58, which becomes operative on July 1, provides for the physical examination of inmates of penal institutions. It requires the warden of the state prison, superintendents of the Massachusetts reformatory, the reformatory for women and the prison camp and hospital and the keepers and masters of jails and houses of correction to cause a thorough physical examination to be made by a competent physician of institution inmates committed for a term of thirty days' imprisonment or more, special attention being given to determining the presence of communicable diseases, particularly gonorrhœa, syphilis and pulmonary tuberculosis. The state department of health is charged with the promulgation of specifications governing the examinations and the keeping of medical records.

Chapter 96 deals with reports and records of venereal diseases. By this act, hospital, dispensary, laboratory and morbidity reports and records pertaining to gonorrhœa or syphilis shall not be public records, and the contents shall not be divulged by any person except upon proper judicial order or to a person whose official duties, in the opinion of the commissioner of health, entitle him to receive such information. Laboratory, dispensary and morbidity reports and records of cases of gonorrhœa or syphilis, other than the permanent records of hospitals and institutions, shall be destroyed at the expiration of five years from the year in which they were made.

Chapter 111 authorizes registered physicians and surgeons to disclose information pertaining to venereal diseases to any person or to the parent or guardian of any minor, from whom the infected person has received a promise of marriage. Such information given in good faith by a duly registered physician or surgeon shall not constitute a slander or libel.

Chapter 117 deals with the making of uniform physicians' certificates of exemption from vaccination. It provides that a child who has not been vaccinated shall not be admitted to a public school except upon presentation of a certificate the same as the physician's certificate required by the provisions of section 139 of chapter 75 of the Revised Laws, as amended by section 2 of chapter 190 and by section 10 of chapter 544 of the Acts of 1902. It further provides that a child who is a member of a household in which a person is ill with smallpox, diphtheria, scarlet fever, measles, or any other infectious or contagious disease, or of a household exposed to such contagion from another household as aforesaid, shall not attend any public

school during such illness until the teacher of the school has been furnished with a certificate from the board of health of the city or town or from the attending physician of the person stating that the danger of conveying such disease by such child has passed.

Chapter 130 treats of the reporting of dangerous diseases by local boards of health to the state department of health. It requires boards of health of cities and towns, or selectmen acting as a board of health, to appoint some person, who may or may not be a member of the board, whose duty it shall be to give notice to the state department of health of diseases dangerous to the public health as provided by section 52 of chapter 75 of the Revised Laws, as amended by section 1 of chapter 480 of the Acts of 1907 and by chapter 55 of the General Acts of 1916. A claim of a city or town against the commonwealth for reasonable expenses incurred by the board of health of such city or town, or by the board of selectmen acting as such, in making the provision required by law for persons infected with a disease dangerous to the public health, shall not be defeated by reason of the failure on the part of its board of health or board of selectmen to give notice of such disease to the state department of health in accordance with the provisions of said section 52 as amended as aforesaid, if such claim is otherwise a valid claim against the commonwealth.

Chapter 131 requires that dispensaries shall be licensed by the state department of health. It defines dispensaries as places or establishments, not conducted for profit, where medical or surgical advice or treatment, medicine or medical apparatus, are furnished to persons nonresident therein; or any place or establishment, whether conducted for charitable purposes or for profit, advertised, announced, conducted or maintained under the name "dispensary" or "clinic," or other designation of like import. These permits are to be issued when the operation of the proposed dispensary will be for the public benefit. They expire at the end of the calendar year in which they are issued, but may be renewed annually. They are not transferable except on the approval of the department. The license fee is five dollars, except for incorporated charitable organizations which conduct dispensaries without charge and which report as required by law to the state board of charity. The public health council of the state department of health is authorized to make rules and regulations for the conduct of dispensaries. The commissioner of health, and his authorized agent, have authority to visit and inspect dispensaries at any

time in order to ascertain whether they are licensed and conducted in compliance with this act and with the rules and regulations of the department. After thirty days' notice, and a hearing, licenses may be revoked. Dispensaries legally incorporated or in operation at the date of the passage of this act shall, on application, be permitted to remain in operation for the remainder of the calendar year without fee. Dispensaries are to be inspected prior to the thirty-first day of December in the current year.

Chapter 137 is an act relative to the procedure in prosecutions for selling or keeping adulterated or misbranded vinegar. It states that where vinegar is misbranded or adulterated within the meaning of the law, the state department of health, or the local board of health, as the case may be, shall not be required to enter complaint at once, but shall be required to give a hearing in accordance with the provisions of section 5 of chapter 208 of the General Acts of 1917.

Chapter 145 deals with the standard of cider vinegar by eliminating the former legal requirement as to the amount of cider vinegar solids. This change was originally advocated by this department some years ago, but it did not then meet with the approval of cider vinegar manufacturers. The above act indicates that the suggestion of the department has now been adopted by cider vinegar manufacturers and dealers, as they were the principal advocates in behalf of this legislation.

SUGGESTIONS FOR HOT WEATHER.

Dress lightly.

Bathe often.

Eat sparingly and of but little meat.

Encourage breast feeding in infants.

Eat only good food.

Drink plenty of water, abstain from ice water, especially when very hot or exhausted.

Rest as much as possible in a cool place.

Get plenty of fresh air and sunshine, but avoid undue exposure to the sun.

Avoid alcohol in all forms and excesses of all kinds.

Do not overwork, overeat or exhaust yourself.

Flies and mosquitoes have no place in a clean man's home.

FOURTH OF JULY TETANUS.

The blank cartridge wound is the great cause of Fourth of July tetanus, but injuries from firecrackers and firearms are at times responsible. When driven into the tissues the wadding carries with it innumerable bacilli. If these be tetanus bacilli the poisonous products or toxins resulting from their multiplication produce the disease. Tetanus bacilli thrive only in the absence of oxygen. It is for this reason that the physician enlarges the wound of entrance and after removing all foreign material dresses the injury in such a manner that development of the organisms is inhibited. In order to accomplish this it is usually necessary to administer an anæsthetic. Anti-tetanic serum is of great value as a prophylactic and it should invariably be given in injuries of this character.

Parents should realize that Fourth of July tetanus is easy to prevent but extremely difficult to cure, the disease being attended with a mortality of more than 95 per cent. No blank cartridge wound is too trivial to receive careful medical attention. However slight the injury may appear, summon a competent physician, who will at once institute the necessary prophylactic measures. Reliance upon home treatment may prove disastrous and result in the needless sacrifice of life.

REPORT OF THE HEALTH UNIT FOR THE MONTH OF MAY, 1918.

Health Department.

Visits made by medical inspector:

Contagious	31
Tuberculosis	2
Ophthalmia	3
Miscellaneous	7
Total	<u>53</u>

Cases visited by nurses:

Medical	210
Babies	129
Total	<u>339</u>

Defective sanitary conditions found in tenement houses,	4
Calls by district physician from Boston Dispensary .	100

Instructive District Nursing Association.

Visits made by nurses	654
---------------------------------	-----

Baby Hygiene Association.

Total number of babies cared for	179
New babies admitted	24
Babies readmitted	5
Conferences held	4
Total conference attendance	303
Home visits by nurses	366

Associated and Hebrew Federated Charities.

Cases investigated and assisted	2
---	---

Consumptives' Hospital Department.

Calls by nurses in district	650
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SUMMARY OF VITAL STATISTICS.

There were 983 deaths reported in the month of May, against 1,137 in the corresponding period last year, a death rate of 14.72 against 17.33.

Reported deaths of nonresidents numbered 158, against 166 last year.

Of deaths from reportable diseases the principal decreases and the principal increases were:

Increases:

Cerebro-spinal meningitis	4
Whooping cough	14
Tuberculosis (pulmonary)	30

Other important differences were:

Decreases:

Pneumonia	49
Erysipelas	14
Heart disease and nephritis	56

The principal increases were:

Cancer	12
Premature birth	6

There were 13 less deaths under 1 year, 10 less under 2 years and 1 more under 5 years.

NUMBER OF CASES AND DEATHS FROM COMMUNICABLE DISEASES FOR MAY.

	CASES.			DEATHS.		
	1918.		1917.	1918.		1917.
	Total.	Non-resident.	Total.	Total.	Non-resident.	Total.
Diphtheria.....	289	81	352	16	1	33
Scarlet fever.....	135	23	158	2	1	4
Measles.....	1,416	15	971	21	1	19
Typhoid fever.....	14	1	12	2	.....	2
Whooping cough.....	235	3	71	18	.....	4
Pulmonary tuberculosis.....	303	31	191	115	10	85

MORTALITY FOR MAY AND CORRESPONDING MONTH IN 1917.

	1918.	1917.
Total deaths	983	1,137
Nonresidents	158	166
Rate	14.72	17.33
Corrected rate (nonresidents deducted)	12.36	14.80
Deaths under 1 year	156	169
Deaths under 2 years	207	217
Deaths under 5 years	256	255
Deaths over 60 years	258	339

CAUSES OF DEATH.

	Totals, 1918.	Non- residents, 1918.	Totals, 1917.
Cerebro-spinal meningitis	7	3	5
Diphtheria	16	1	33
Measles	21	1	19
Scarlet fever	2	1	4
Tuberculosis (pulmonary)	115	10	85
Tuberculosis (other forms)	15	7	16
Typhoid	2	—	2
Whooping cough	18	—	4
Accidental and violent	73	13	74
Heart disease, endocarditis, pericarditis and nephritis, .	151	15	207
Bronchitis	4	—	13
Cancer	90	15	78
Diarrhea and enteritis (under 2 years)	16	7	14
Diarrhea and enteritis (2 years and over)	6	—	12
Erysipelas	8	1	22
Meningitis and encephalitis	10	1	6
Old age	1	—	2
Pneumonia	113	17	162
Premature birth	40	7	34
Puerperal diseases	7	1	13
Rheumatism	—	—	5
Syphilis	7	2	6
Influenza	1	—	3
Other causes	260	56	318

**The Following is a Summary of the Work Done by the
Different Divisions in the Department for May,
1918.**

CENTRAL DIVISION.

Prosecutions authorized	10
Stable hearings	2
Stable license refused	1
Stable license approved	1
Premises ordered vacated	5
Miscellaneous orders	10
Application lying-in hospital approved	1
Forcible removals ordered	2
Resignation	1
Appointments	2
Conferences	3
Leave of absence granted	1
Hearings	3
Dump applications	4
Public lodging houses certified	3
Orders rescinded	3
Special draft	1
Constable appointed	1
Undertakers appointed	2

Licenses — Permits

Licenses to peddle fruit and vegetables	193
Grease license granted	1
Grease license renewed	1
Manicure — Massage	3
Dump permit	1
Special permits	2
Hen permits	202
Numbers assigned	277
Sundry license	1
Vehicles inspected and approved	486
License revoked	1
Offensive trade licensed	1
Milk licenses	1,798
License to remove grease, bones, etc.	1
Licenses renewed to remove grease, bones, etc.	76

MEDICAL DIVISION.

Communicable Diseases.

Number of visits by medical inspectors	1,464
Antitoxin given	27
Deaths investigated	23
Cases brought to Boston for treatment	134
Vaccinations	1,960
Vaccination certificates	136
Antityphoid vaccine administered	1
Forcible removals recommended	2

Public Health Nursing.

Communicable disease visits	2,868
Number of revisits (infants)	1,628
Number of new babies visited	2,734
	<hr/>
Total visits by nurses	7,230
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BACTERIOLOGICAL LABORATORY.

Examinations for Diagnosis and Release.

Diphtheria	1,185
Tuberculosis	443
Typhoid	102
Gonorrhea	572
Gonorrheal ophthalmia	29
Syphilis	662
T. B. Comp. Fix. Test (special examinations)	662
Other examinations *	129
Bacteriological milk examinations	747
Bacteriological ice cream examinations	27

FOOD INSPECTION.

Live Stock Inspected at Brighton Abattoir.

Cattle inspected	312
Calves inspected	4,404
Swine inspected	3,397
Animals condemned, whole	6
Parts condemned	207
Stores inspected	2,061
Court cases	14
Guilty	12
Appeals	3
Fines	\$910

MILK INSPECTION.

(Examinations as to Statute Requirements.)

Samples examined:

Chemical examinations of milk	1,492
Bacteriological examinations of milk	747
Bacteriological examinations of ice cream	27
Chemical examinations of vinegar	203
Chemical examinations of butter and cheese	10
Chemical examinations of ice cream	17
Miscellaneous examinations	6
Number of court cases	79
Fines	\$1,555

* Malaria, 8; intestines for T. B., 1; paratyphoid, 8; milk for diphtheria, 1; organisms, 5; rabies, 1; K. L. Vir., 1; catgut, 4; rats, 97; genito-urinary T. B., 3.

Inspection of Provisions — Articles Condemned.

Meat:		Fish:	
Poultry . . .	5,700 pounds	Mullets . . .	587 pounds
Duck . . .	55 pounds	Haddock . . .	50 pounds
Turkey . . .	53 pounds	Mackerel . . .	14 pounds
Pigeons . . .	40	Salt fish . . .	600 pounds
Hamburg . . .	28 pounds	Miscellaneous:	
Trimmed meats . . .	52 pounds	Apples . . .	1 barrel
Veal . . .	348 pounds	Strawberries . . .	54 quarts
Beef . . .	139 pounds	Grapefruit . . .	4 crates
Lamb . . .	219 pounds	Peanuts . . .	3,034 pounds
Sheepsheads . . .	475 pounds	Asparagus . . .	96 bunches
Liver . . .	15 pounds	Canned goods . . .	500 cans
Pigs' feet . . .	18 pounds	Pickles . . .	40 bottles
Plucks . . .	20 pounds	Crackers . . .	50 pounds
Pork . . .	208 pounds	Chocolate . . .	200 pounds
Fish:		Eggs . . .	205 dozen
Halibut . . .	16 pounds	Cheese . . .	7 pounds
Smoked fish . . .	1,390 pounds		

SANITARY INSPECTION.

New reports	3,639
New tenement house reports	380
Legal notices recommended	401
Reinspections	6,370
Nuisances reported	4,302
Complaints investigated	952
Court case	1
Fines	\$11

MORBIDITY AND MORTALITY.

(5 Months.)

	1918.	1917.
Total deaths	5,970	6,013
Nonresident deaths	857	830
Deaths under 1 year of age	887	850
Pneumonia	1,038	1,025
Cancer	395	399
Heart disease and nephritis	1,076	1,139
Diarrhea and enteritis under 2 years	68	67

DEATHS FROM COMMUNICABLE DISEASES.

(5 Months.)

	1918.	1917.	1918. Non- residents.
Diphtheria	118	122	38
Scarlet fever	19	24	6
Measles	85	32	11
Typhoid fever	6	8	2
Whooping cough	70	9	3
Tuberculosis	556	490	41

CASES OF COMMUNICABLE DISEASES REPORTED.

(5 Months.)

	1918.	1917.	1918. Non- residents.
Diphtheria	1,681	1,612	320
Scarlet fever	734	817	152
Measles	4,850	3,400	68
Typhoid fever	33	53	3
Whooping cough	1,192	144	10
Tuberculosis	1,217	1,050	100

MONTHLY METEOROLOGICAL SUMMARY, MAY.

ATMOSPHERIC PRESSURE.

(Reduced to sea level; inches and hundredths.)

Mean, 30.05; highest, 30.49; date, 16; lowest, 29.56; date, 8.

TEMPERATURE.

Highest, 89; date, 7; lowest, 44; date, 2; greatest daily range, 35; date, 23; least daily range, 5; date, 30; normal for month, 56.60°.

PRECIPITATION.

Total this month, 1.99; snowfall, 0.0; greatest precipitation in 24 hours, 1.05; date, 1; snow on ground at end of month, T.*; normal for this month, 0.

WIND.

Prevailing direction, southwest; total movement, 7,689 miles; average hourly velocity, 10.3; maximum velocity (for five minutes), 37 miles per hour from northwest, on 6th.

WEATHER.

Number of days clear, 10; partly cloudy, 11; cloudy, 10; on which .01 inch or more of precipitation occurred, 13.

MISCELLANEOUS PHENOMENA (Dates of).

Auroras, 12.16; halos: solar, 6, 24, 26; lunar, 19, 20, 24; hail, 0; sleet, 11, 12; fog, 29, 30; thunderstorms, 6, 8, 21, 27, 28; frost: light, —; heavy, —; killing, —.

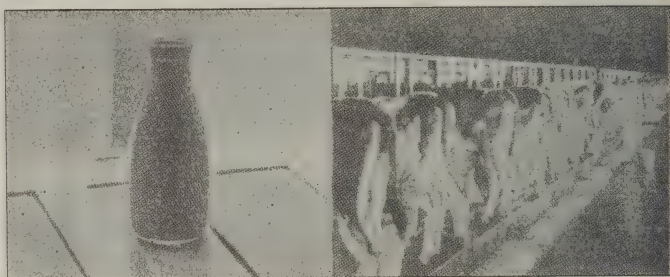
Protect your children from insects.

Guard your food supply. Keep food articles on ice, screen your windows, clean your premises.

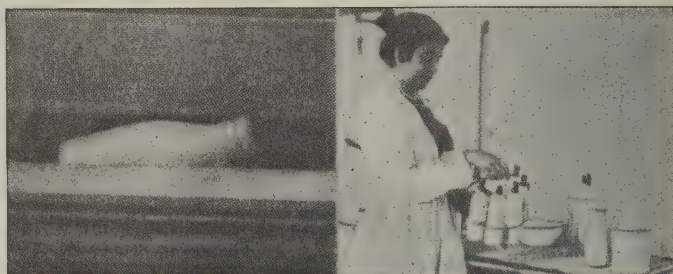
* T indicates trace of precipitation.

ARTIFICIAL FOOD

IF THE DOCTOR SAYS THE BABY
MUST BE ARTIFICIALLY FED GET
HIM TO SHOW YOU HOW



GET BOTTLED MILK—FROM CLEAN COWS



KEEP IT COOL—MIX BY DOCTOR'S ORDERS

CLEAN COW'S MILK MIXED WITH WATER AND
SUGAR AS THE DOCTOR DIRECTS TO SUIT EACH
BABY IS THE BEST SUBSTITUTE FOR MOTHER'S
MILK FOR NORMAL BABIES

1557
JUNE, 1918

MONTHLY BULLETIN
HEALTH DEPARTMENT
OF THE
CITY OF BOSTON



FRANCIS X. MAHONEY, M. D., *Commissioner*

STATISTICS FOR 1917.

Population 772,370			
Births	19,856	Birth rate	25.7
Deaths	12,721	Death rate	16.47
Of these total deaths 15 per cent were nonresidents.			

BOSTON
HEALTH DEPARTMENT
CITY HALL ANNEX
1918

HEALTH DEPARTMENT.

(Tel. Fort Hill 5100.)

Commissioner of Health.

Secretary	1109 City Hall Annex.
Publications	1109 City Hall Annex.
Licenses	1109 City Hall Annex.
Medical Division	1107 City Hall Annex.
Communicable Diseases	1107 City Hall Annex.
Child Hygiene	1108 City Hall Annex.
Health Unit	17 Blossom street.
Vaccination Station	17 Blossom street.
Detention Hospital	Southampton street.
Occupational Clinic	17 Blossom street.
Bacteriological Laboratory	1101 City Hall Annex.
Examination of Cultures	1101 City Hall Annex.
Wassermann Tests	1101 City Hall Annex.
Food Inspection Division	1110 City Hall Annex.
Inspection of Foodstuffs	1110 City Hall Annex.
Examination of Milk and Vinegar	1104 City Hall Annex.
Inspection of Dairies	1102 City Hall Annex.
Brighton Abattoir	Market street, Brighton.
Sanitary Inspection Division	1111 City Hall Annex.
Abatement of Nuisances	1111 City Hall Annex.
Examination of Gas Fitters	1111 City Hall Annex.
Vital Statistics Records and Accounts	1112 City Hall Annex.
Permits for Burial	1112 City Hall Annex.
Superintendent of Peddlers	27 North Grove street.

OFFICE HOURS.

The Health Department will be open from 9 a. m. to 10 p. m., except Saturdays, when the hours will be from 9 a. m. to 1 p. m. and from 5 p. m. to 10 p. m. Sundays and holidays, from 10 a. m. to 12 m. and from 5 p. m. to 10 p. m., for the reporting of cases of communicable diseases, issuing of burial permits, the distribution of antitoxins and vaccines, and the receiving of cultures and widals.

FREE WASSERMANN TESTS.

The Bacteriological Laboratory is prepared to examine free of expense blood specimens by the Wassermann test for syphilis. Tests are made each Tuesday, Wednesday, Thursday and Friday. Blood is drawn from patients in the laboratory each Monday, Tuesday, Wednesday and Thursday from 2 to 4 p. m.

MONTHLY BULLETIN

OF THE

HEALTH DEPARTMENT OF THE CITY OF BOSTON.

FRANCIS X. MAHONEY, M. D., *Commissioner of Health.*

All communications relating to this publication should be addressed to Editor, BULLETIN
OF THE HEALTH DEPARTMENT, BOSTON.

VOL. 7.

BOSTON, JUNE, 1918.

NO. 6

It is the Duty of All to Promote Health.

MOSQUITOES.

The mosquito may act as a carrier of diseases such as malaria, yellow fever, dengue and filariasis and in this section particularly, malaria; where any of these diseases exist or threaten the mosquito may be looked to as the cause. In places where these diseases are not found, safety, comfort and property values should be the consideration for the eradication of the mosquito.

Mosquitoes breed and develop only in still or stagnant water and their presence in or near a house is indicative of a breeding place nearby. The malarial mosquito usually breeds at the margin of ditches and lakes, especially where reeds or other plant growth is found, as in swamps and low lands. The adult female mosquito of the *Anopheles* type is the carrier of malaria, inasmuch as it is the one that carries the infection in its bite, and while hidden in the daytime is in evidence at night. All mosquitoes do not carry infection; only the *Anopheles* that has already bitten an infected person carries the malaria organism.

In this regard we should aim towards the protection of the body from the mosquito and the elimination of his breeding place. Screening is most important in homes, hospitals and working places in districts where the mosquito is prevalent. Theoretically, of course, the most effectual way is to prevent the breeding and growth of the mosquito, and draining, ditching and filling in must be resorted to and in some cases the banks of streams, ponds and ditches must be deepened and straightened, freed from plant growth and vegetation of any

kind. Temporary measures may be resorted to and crude oil or kerosene the instrument for eradication. Various poisonous and chemical substances may also be used to destroy the larvæ of the mosquito. Pools and streams may be supplied with small fish, such as goldfish, which eat the eggs of the mosquito and remove any possibility of their breeding, especially if the stream or pond is kept free from weeds and rank growth. This has been demonstrated to the utmost satisfaction in the Barbadoes. Great success has attended the attempts to destroy mosquitoes by wholesale in the Panama Canal zone, Havana, Port Said, Hong Kong, Candia, Greece, Algeria and other countries.

Hundreds of these insects may breed in cisterns, open traps, blocked rain gutters, old tin cans, cesspools, and in fact any place where water may collect and remain.

It is for us to take only ordinary precautions of cleanliness on our premises by the removal of such débris and the filling in of any stagnant pools where a mosquito may breed. Screen windows in the home and hospital. Appropriations should also be provided in departments, to be used in the purchase of oil and labor for petrolizing purposes and also for draining and ditching when necessary.

DECOMPOSED HORSE MEAT ON SALE.

In the early part of June a piece of flank corned beef was brought to the Food Division by a resident of East Boston. This meat was tainted and unfit for food. On closer inspection by the authorities its meat was strongly suspected of being horse meat, but on account of the curing and small specimen of meat a chemical examination could not be made of it. From information received, two inspectors of the Food Division visited a butcher shop on Porter street, East Boston, and there found exposed for sale a flank, a round, and a hind quarter of meat. This flank and round were pronounced horse meat. The hind quarter was a bull quarter. The inspectors learned that this meat was delivered at one o'clock in the morning of the previous day, and the proprietor of the store thought it was all bull beef. They next visited a butcher on Chelsea street and inspected about 100 pounds of cut meat in a packing box. This meat was tainted and unfit for food and was composed of a mixture of horse meat and bull beef. None of this meat at either store bore the inspection brand as required by law. The inspectors seized and condemned all this meat and left the store to get a conveyance to bring the meat to the office of the Food Division. When they returned to the

Chelsea street store they found the meat had been removed, so, pressing a passing automobile into service, chased a team, stopped it, and found the condemned meat in it.

On going back to the Porter street store they found that the proprietor of the Chelsea street store had been there and urged the owner to get rid of that meat at once as the food inspectors were after it. The meat, when brought to the office of the Food Division, was carefully inspected and the horse meat separated from the bull beef and given to the chemist for chemical examination. The principal determining factors in the horse meat was the magenta red color of the flesh, the sharp separation of the muscles and the pronounced inter-muscular cellular tissue. As the horse meat was some days old, no distinctive odor could be obtained.

The proprietor of the butcher shop on Chelsea street confessed that he was the instrument through which a horse dealer residing in Brockton sold animals slaughtered by him on his farm. He was unable, however, to locate this man for the health authorities. The proprietors of the butcher stores where the meat was seized were arrested and their cases will soon be disposed of in court where prosecution has been entered.

A NOURISHING BEVERAGE.

The utilization of milk products, now being strongly urged, can be advantageously aided by a more extended use of butter-milk. This substance is not only a thirst quencher but also contains valuable food material. While its composition varies, approximately it contains

Protein	3.00 per cent
Milk sugar	5.00 per cent
Mineral matter	0.70 per cent
Fat . . . . .	.50 per cent

It will thus be seen that with the exception of the fat, butter-milk contains practically the food substances of whole milk. It merits more extended use.

CAUTION.

A nursing mother with a cold should tie a thin cloth or veil over her mouth and nose while nursing the baby and should be careful never to cough or sneeze in its face nor kiss it on the mouth. She should be particularly careful not to use her own handkerchief for the baby, nor sleep with it, while the disease lasts.

TYPHOID FEVER.

With the practical elimination of water-borne typhoid fever infection through measures taken to insure safe public water supplies, typhoid fever ceased to be an important public health problem in Massachusetts many years ago. Occasional local outbreaks of the disease have continued to occur from time to time as the result of accidental contamination of milk supplies, but with the more general pasteurization of milk, typhoid outbreaks attributable to this source of infection have been of rare occurrence in the state for the last seven years. Furthermore, it is now nearly two years since a case of any communicable disease whatever has occurred in Boston traceable to milk-borne infection.

Boston's typhoid fever record for the past four years is shown in the following table:

Typhoid Fever Deaths and Cases.

YEAR.		January.	February.	March.	April.	May.	June.	Six Months, Total.	Yearly Totals.
1914.....	Cases....	102	32	19	17	25	23	218	502
	Deaths...	14	8	6	2	2	4	36	66
1915.....	Cases....	22	15	18	9	17	26	107	398
	Deaths...	1	3	5	.....	1	3	13	40
1916	Cases....	7	5	11	7	8	11	49	185
	Deaths...	2	.....	3	.....	1	1	7	25
1917.....	Cases....	7	9	9	16	12	15	68	201
	Deaths...	2	.....	4	.....	2	1	9	22
1918.....	Cases....	3	8	3	5	14	8	41	.....
	Deaths...	3	2	.....	.....	2	1	8	.....

When a case of typhoid fever is reported in the city an immediate investigation is made by this department in an effort to determine the probable source of infection.

For the most part, the cases of typhoid included in the above table were undoubtedly contracted outside of the city and often outside the state, but every year a certain number of cases occur in Boston which must be attributable to local infection. In some instances close association with pre-existing cases of the disease or with individuals found to be "typhoid carriers" seems to make personal contact the probable means of infection. In other instances investigation fails to give a clue to the probable source of infection and we can only suspect that some unknown carrier has been the infecting agent. For several years past

a certain number of cases of the disease have been occurring in East Boston, the North End and South Boston in which cumulative circumstantial evidence points to the collection and eating of shellfish in and about the harbor as the source of infection. Shellfish from prohibited areas are surreptitiously sold for food but there also appears to be a danger from contamination of the fingers when shellfish from sewage-polluted flats are used for bait.

The real lesson to be drawn from Boston's typhoid record as shown in the above table is that residents who contract typhoid fever elsewhere and bring back the disease to the city with them run the number of annual cases of the disease up to an unnecessary total in the course of the year. It is today so easy to secure passive immunity to typhoid by means of typhoid vaccine that everyone ought to take the trouble to protect himself against the disease for the sake of his family and his city, even if he cares nothing about himself.

FIRST CARE OF THE NEW-BORN BABY.

1. See that the eyes are examined and washed with boric acid solution. Directions for making boric acid solution: One (1) teaspoonful to one-half ($\frac{1}{2}$) pint of boiled water.

Within a few days after birth there sometimes occurs a serious condition in the eyes known as ophthalmia neonatorum, which comes from an infection during birth or soon after. This may be prevented if the physician will use the proper antiseptic treatment. This disease is contagious and great care should be taken by the mother or nurse that all articles used by the baby are kept separate and carefully boiled in process of washing.

2. Place the baby in a warm, clean blanket and rub its entire body and head with warm vaseline or olive oil.

3. In dressing the cord use boric acid powder and clean, sterile gauze dressings.

4. Before the separation of the cord, the baby should have a daily sponge bath with warm water. White soap, preferably castile, should be used for the bath. The baby should be thoroughly dried with a soft towel, the creases separated and powdered with talcum powder or starch.

5. Care should be used in selecting a perfectly clean diaper of a soft cotton material, and pinned on with safety pins. A clean undershirt and warm night dress are then put on and the baby allowed to sleep undisturbed as long as it will.

THE NURSING MOTHER.

1. The mother should remain in bed at least ten days after confinement, and should not get up until advised to do so by her physician.

2. Keep the nipples and breast clean. They should be washed gently with a solution of boric acid or clean boiled water, thoroughly dried, and kept clean and dry as possible after each nursing. Caked breasts or cracked nipples are the usual causes of breast abscesses.

3. The nursing mother must be free from anxiety, worry and excitement.

4. The diet for a nursing mother should be outlined by the physician or nurse and in accordance with the special needs of the case. The same diet does not often agree for all cases.

5. The diet should be mixed, plain and ample, and consist of light, nutritious, digestible foods, and prepared in an appetizing way. It is impossible to supply the proper amount of breast milk for the baby unless the mother is properly and plentifully fed.

6. Avoid alcoholic drinks and excessive amount of tea or coffee.

7. Drink plenty of good pasteurized milk, at least a quart a day.

8. Drink daily at least eight glasses of water that has been previously boiled and cooled.

9. Constipation should be carefully avoided. The bowels should move every day and be kept regular by eating laxative foods. Never take drugs or medicines for constipation unless by advice of your physician.

10. The first month after the baby is born moderate exercise for the mother out of doors is a good tonic. Walking is one of the best forms of exercise. However, never exercise to a point of fatigue. Begin moderately and increase amount as strength increases. Guard most carefully against overtaxing the mother's strength.

11. A nursing mother needs abundance of sleep and rest, at least eight hours of sleep at night, with the windows open, and a rest period during the day.

12. Bathing daily in warm water is most desirable.

13. Outdoor life is the best form of recreation and amusement and should be simple and not exciting or tiring.

A happy, healthy, nursing mother means a happy and healthy baby.

CARE IN REPORTING DISEASES THAT MIGHT MENACE HEALTH OF TROOPS URGED UPON DOCTORS.

The Public Health Service, Treasury Department, has sent the following letter to local health officers:

"It is important for the protection of the health of the troops in camps that every community, no matter how small, report the presence of all communicable diseases, especially if present in epidemic proportions. Selected and enlisted men in traveling may be exposed to such diseases and carry them into camp.

It is obvious that disease reporting depends primarily upon the doctors, but local health authorities should realize that the grave responsibility rests upon them of obtaining reports of all notifiable diseases from the doctors in their jurisdictions. In addition to rendering more complete reports under present regulations for reporting disease, it is highly desirable that physicians report immediately those cases where a selected or enlisted man has been so exposed to a communicable disease as to be a menace to any camp or post in the United States.

Plan of Action Suggested.

For this purpose the following plan of action is suggested by the United States Public Health Service after a conference with army sanitary authorities:

1. The physician should make an immediate report to the local health authorities, who should notify (by telephone or telegraph if necessary) the senior medical officer of the camp or post to which the selected man or soldier may become a menace. A duplicate notification should be made by the local authorities to the state health authorities.

2. If there be no local health authority having jurisdiction, the physician should notify (by telephone or telegraph if necessary) the state health officer, who should notify (by telephone or telegraph if necessary) the senior medical officer of the camp or post to which the selected man or soldier is about to go.

3. The notification should be explicit, giving name of selected man or soldier and other identification data, together with his address and the nature of the disease.

4. The notification of the senior medical officer of the camp or post by the local or state health authorities should be in addition to the present procedure in such cases."

While the procedure suggested in the letter above quoted is already provided for so far as Boston is concerned, this official communication points out a patriotic duty at this time which rests not only upon physicians but upon every citizen of this city.

There are perhaps about 50,000 men and officers of the army and navy in this vicinity whose health depends upon the prevalence or absence of communicable diseases in the general population in the City of Boston. There are probably an equal number of persons in this vicinity among whom the prevalence of sickness to any unusual degree would mean an interference with war work to such an extent as perhaps to cause a serious disaster in some of our military operations.

The prevention of a local epidemic disease situation that might produce far-reaching military consequences actually depends upon the manner in which individual practising physicians, in private or hospital practice in this vicinity, and citizens generally, perform a duty which has been imposed upon them by the laws of this state.

Without stopping to think how a municipal health department really fits into the legislative scheme adopted by this state for the control of the spread of communicable diseases, the public is likely to look upon disease control as the work of paid health department officials. It is true that our state laws give municipal health departments a certain amount of carefully defined authority to enforce measures to prevent the spread of some specifically designated communicable diseases, but the spread of such diseases cannot be checked unless the cases which serve as a foci of infection can be located, and under the health legislation scheme of the state, householders and physicians are the legally constituted agencies by which contagious diseases are expected to be located. By the law, householders and physicians are both virtually made a part of the public health organization of the state. It is made the legally prescribed duty of either to report in a designated manner any person who is "infected" or "sick" with any one of the diseases designated by the State Department of Health as notifiable. In the case of physicians, their public health function goes even further than this, for in a great measure they are entrusted with the duty of seeing that prescribed precautions to prevent danger to the public from cases of communicable diseases, already located, are carried out. Practically, also, the efficiency of such precautionary measures depend to a considerable extent upon the coöperation of the families concerned.

Householders seldom realize the obligations to the public impose upon them by law. On the other hand, paid health officials are accustomed to go beyond their legally contemplated function in efforts to protect the public health; nevertheless their dependency upon the practising physician in this matter cannot be materially lessened under our form of civil government.

One day's experience with the routine work of this department would be sufficient to satisfy anyone that the average physician in this city is wide-awake professionally and fully alive to his public responsibilities. Incidents do occasionally come through the attention of the department which are the same that will always be found to be at the bottom of troublesome epidemics of contagious diseases whenever and wherever such epidemics occur. As concrete examples, local outbreaks of diphtheria will be found to be due to unrecognized cases of nasal diphtheria, or individuals wandering around with smallpox will be found to have been told that they had a digestive upset, or perhaps pustular eczema.

Instances of the character just mentioned are not likely to occur in a city like Boston so often from lack of professional skill or lack of diagnostic ability as from a common attitude of physicians towards cases of sickness with symptoms not as yet sufficiently pronounced to warrant a positive diagnosis. The chances greatly favor the correctness of an assumption that such a beginning sickness is not going to turn out to be a disease of interest from the viewpoint of public health. Precautions which afterward prove unnecessary may result in unfavorable even though unjustifiable criticism of the physician. In a time like the present, however, it is well to keep in mind the fact that the spread of a communicable disease can never be prevented if one waits until a positive diagnosis can be made before adopting precautionary measures for the protection of others when cases of sickness appear. Serious contagious diseases do not in the beginning present clinical symptoms which can enable anyone to distinguish them from other affections less important to the general public.

If a physician is called to see a patient who has been taken suddenly ill and who shows nothing but marked prostration and a high temperature, it will probably be a safe guess that it is not typhus fever; yet two cases of typhus, one of them fatal, are known to have occurred in this vicinity last winter, and from what we know about typhus one is certainly justified in guessing that unrecognized cases of the disease have occurred here. If

a patient shows the above symptoms plus a localized glandular swelling, there are other explanations far more probable than bubonic plague, yet some day just such a case may offer the first means of discovering that the disease exists among the rats of this city. A prompt diagnosis of such a case may not prevent the transfer of Boston shipping to some other port, but it may save the taxpayers of the city several million dollars in securing the eradication of the disease among the rats.

During the next twelve months, the physicians of Boston will be called to attend many cases of grip. In all probability some persons taken sick in this city in these twelve months with symptoms practically indistinguishable from those of the grip will later prove to have cases of smallpox.

The application of an invariable rule to regard every case of sickness occurring in the civil population of Boston at present as a possible case of serious contagious disease until proved otherwise is impracticable as well as unjustifiable, but with all the facilities for medical diagnosis available in Boston, including the laboratory and expert aid which this department stands ready to furnish on call, there is no excuse for the failure of any physician in this city to secure a correct diagnosis in any case as soon as it is humanly possible to make one.

Moreover, in view of the present national importance of local health conditions, as pointed out in the official communication quoted in the beginning, is it unreasonable to expect Boston physicians to go further than this? During the past year there were 4,098 cases of diphtheria in Boston. Is it not probable that the number of cases would have been considerably less if every physician in the city had regarded it as his patriotic duty to utilize every opportunity to put into effect measures which are known to prevent the spread of this disease? Again take smallpox. By good luck Boston escaped an epidemic of this disease the past winter. At the instigation of this department a considerable amount of vaccination was done but there was a tendency on the part of some physicians to advise people to wait until an acute situation arose before being vaccinated. In connection with the department's effort to secure vaccination it became apparent that while an outbreak of smallpox among the workers in any of the large war plants in this vicinity would demoralize the plant, a wholesale vaccination of all the workers at one time would also be likely to cause a serious interference with the work by reason of the probable number of resulting sore arms.

Smallpox is prevalent in the United States to a greater

extent than for many years, and Boston's escape from an epidemic the past year gives no assurance of a continuation of its good fortune. The vaccination of large numbers of people at times of epidemics always causes interference with industries and when vaccinations are done on a wholesale scale there is always more trouble with sore arms because it is less carefully done. Smallpox has prevailed in epidemic form in portions of New England during the past winter. Every unprotected individual who is vaccinated in Boston puts one more obstacle in the way of an epidemic in this city. Is it therefore unreasonable to expect every citizen, physician or layman, who wants to do what he can for his country at this time to do his part toward preventing a reproduction in Boston of the smallpox epidemics which have recently prevailed in Cleveland, Indianapolis, St. Louis and other cities of the middle west.

LOW BACTERIAL CONTENT OF MILK.

The Department of Agriculture discusses "The four essential factors in the production of milk of low bacterial content," in Bulletin No. 642. Based upon extensive experiments, the bulletin points out that the three most essential factors for the production of milk of low bacterial content are the following:

Sterilized utensils, clean cows with clean udders and use of the small top milk pail.

It was shown that where these conditions prevailed it was possible, without expensive barns and equipment, to produce milk practically free from visible dirt, which in a fresh condition had a low bacterial count.

A fourth necessary factor was that of refrigeration, namely, holding the milk at a temperature near ten degrees C. (50 degrees Fahrenheit) or lower, in order to retard bacterial development. The latter feature is vital for the maintenance of good quality in both milk and cream.

FLY SUPPRESSION.

Swat them.

Keep all food covered (especially milk) so that they may not obtain subsistence. Use equal care with garbage containers; see that they do not leak and are kept covered.

If necessary employ sticky fly paper and poisoned fly paper by placing it where it will be accessible to these pests.

For the protection of health of human beings food should be covered to prevent filthy contamination by flies.

Deaths Under 1 Year, by Months, for Measles, Whooping Cough, Bronchitis and Pneumonia.

	January.		February.		March.		April.		May.		Total.	
	1917.	1918.	1917.	1918.	1917.	1918.	1917.	1918.	1917.	1918.	1917.	1918.
Measles.....	1	3	1	2	1	7	3	8	3	5	9	25
Whooping cough.....	2	3	.....	6	2	3	.....	9	4	10	8	31
Bronchitis.....	6	10	4	7	2	2	1	2	5	2	18	23
Pneumonia, bronchial and lobar.....	33	41	49	58	41	54	31	37	26	26	180	216

SMALLPOX VIRUS.

The United States Government has recently issued an order prohibiting the marketing of smallpox virus in any form other than by means of the capillary tubes. This regulation was found necessary on account of the greater ease with which the ivory and bone points can be altered. All of the smallpox virus therefore which we will distribute in the future will be in the form of capillary tubes. This is a war time measure.

REPORT OF THE HEALTH UNIT FOR THE MONTH OF JUNE, 1918.

Health Department.

Visits made by medical inspector:

Contagious	43
Tuberculosis	2
Ophthalmia	2
Miscellaneous	15
Total	<u>65</u>

Cases visited by nurses:

Medical	198
Babies	192
Total	<u>390</u>

Defective sanitary conditions found in tenement houses,	5
Calls by district physician from Boston Dispensary .	71

Instructive District Nursing Association.

Visits made by nurses	648
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Baby Hygiene Association.

Total number of babies cared for	189
New babies admitted	27
Babies readmitted	1
Conferences held	5
Total conference attendance	357
Home visits by nurses	334

Associated and Hebrew Federated Charities.

Cases investigated and assisted	1
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Consumptives' Hospital Department.

Calls by nurses in district	650
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SUMMARY OF VITAL STATISTICS.

There were 863 deaths reported in the month of June, against 999 in the corresponding period last year, a death rate of 13.39 against 15.74.

Reported deaths of nonresidents numbered 139, against 157 last year.

Of deaths from reportable diseases the principal decreases and the principal increases were:

Increases:

Whooping cough	12
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Other important differences were:

Decreases:

Diphtheria	7
Measles	11
Scarlet fever	5

The principal increases were:

Premature birth	14
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There were 8 less deaths under 1 year, 19 less under 2 years and 22 less under 5 years.

NUMBER OF CASES AND DEATHS FROM COMMUNICABLE DISEASES FOR JUNE.

	CASES.			DEATHS.		
	1918.		1917.	1918.		1917.
	Total.	Non-resident.	Total.	Total.	Non-resident.	Total.
Diphtheria.....	196	49	362	14	7	31
Scarlet fever.....	78	15	116	2	2	7
Measles.....	916	6	949	9	.....	20
Typhoid fever.....	8	2	15	1	.....	1
Whooping cough.....	220	3	46	12	.....	.....
Pulmonary tuberculosis.....	288	26	253	95	5	103

MORTALITY FOR JUNE AND CORRESPONDING MONTH IN 1917.

	1918.	1917.
Total deaths	863	999
Nonresidents	139	157
Rate	13.39	15.74
Corrected rate (nonresidents deducted)	11.23	13.26
Deaths under 1 year	132	140
Deaths under 2 years	160	179
Deaths under 5 years	190	212
Deaths over 60 years	251	281

CAUSES OF DEATH.

	Totals, 1918.	Non- residents, 1918.	Totals, 1917.
Cerebro-spinal meningitis	9	3	9
Diphtheria	14	7	31
Measles	9	—	20
Scarlet fever	2	2	7
Tuberculosis (pulmonary)	95	5	103
Tuberculosis (other forms)	13	2	21
Typhoid	1	—	1
Whooping cough	12	—	—
Accidental and violent	71	14	81
Heart disease, endocarditis, pericarditis and nephritis, .	177	18	192
Bronchitis	3	1	10
Cancer	66	15	85
Diarrhea and enteritis (under 2 years)	23	6	21
Diarrhea and enteritis (2 years and over)	3	—	6
Erysipelas	2	—	7
Meningitis and encephalitis	7	2	4
Old age	4	—	4
Pneumonia	56	6	76
Premature birth	44	7	30
Puerperal diseases	7	1	12
Rheumatism	6	1	6
Syphilis	10	1	8
Influenza	1	—	1
Other causes	228	48	264

**The Following is a Summary of the Work Done by the
Different Divisions in the Department for June,
1918.**

CENTRAL DIVISION.

Stable hearing	1
Stable license revoked	1
Stable license approved	1
Premises ordered vacated	7
Miscellaneous orders	4
Application lying-in hospital approved	1
Forcible removals ordered	2
Resignation	1
Appointments	2
Conferences	5
Hearings	3
Dump applications	3
Orders rescinded	2
Special draft	1
Temporary appointments	3
Cemetery hearing	1
Prosecutions	4

Licenses — Permits.

Milk licenses	471
Vehicles inspected and approved	423
Manicure — Massage	420
Numbers assigned	186
Licenses to peddle fruit and vegetables	137
Hen permits	97
Licenses renewed to remove grease, bones, etc.	83
Court cases	13
Dump permits	3
Sundry licenses	2
Special permit	1
Grease license granted	1
Grease license renewed	1
License revoked	1
Offensive trade licensed	1
Permit to reoccupy	1
Fines	\$40

MEDICAL DIVISION.

Communicable Diseases.

Number of visits by medical inspectors	878
Antitoxin given	30
Deaths investigated	19
Cases brought to Boston for treatment	122
Vaccinations	26

Vaccination certificates	45
Antityphoid vaccine administered	12
Forcible removals recommended	2

Public Health Nursing.

Communicable disease visits	1,941
Number of revisits (infants)	1,577
Number of new babies visited	2,252
Total visits by nurses	<u>5,770</u>

BACTERIOLOGICAL LABORATORY.

Examinations for Diagnosis and Release.

Diphtheria	791
Tuberculosis	317
Typhoid	54
Gonorrhea	657
Gonorrheal ophthalmia	32
Syphilis	740
T. B. Comp. Fix. Test (special examinations)	740
Other examinations *	154
Bacteriological milk examinations	458
Bacteriological ice cream examinations	14

FOOD INSPECTION.

Live Stock Inspected at Brighton Abattoir.

Cattle inspected	350
Calves inspected	1,234
Swine inspected	1,034
Parts condemned	181
Stores inspected	1,437
Court cases	7
Fines	\$25

MILK INSPECTION.

(Examinations as to Statute Requirements.)

Samples examined:	
Chemical examinations of milk	1,272
Bacteriological examinations of milk	458
Bacteriological examinations of ice cream	14
Chemical examinations of vinegar	176
Chemical examinations of butter and cheese	4
Chemical examinations of ice cream	16
Miscellaneous examinations	7
Number of court cases	56
Fines	\$825

* Malaria, 8; kangaroo tendon, 1; catgut, 46; rats, 91; genito-urinary T.B., 7.

Inspection of Provisions — Articles Condemned.

Meat:		Fish:	
Poultry	2,390 pounds	Codfish	750 pounds
Veal	218 pounds	Salmon	9½ pounds
Beef	40 pounds	Flounders	3 pounds
Lamb	37 pounds	Miscellaneous:	
Corned beef	13½ pounds	Tomatoes	1,650 pounds
Hamburg	14 pounds	Potatoes	54 pounds
Liver	12 pounds	Cheese	320 pounds
Pork	28 pounds	Eggs	77 dozen
		Canned goods	500 cans
		Sausage casings	1,000 pounds

SANITARY INSPECTION.

New reports	7,905
Legal notices recommended	486
Reinspections	4,956
Nuisances reported	5,629
Complaints investigated	871
Court case	1

MORBIDITY AND MORTALITY.

(6 Months.)

	1918.	1917.
Total deaths	6,843	7,012
Nonresident deaths	998	987
Deaths under 1 year of age	1,014	990
Pneumonia	1,088	1,101
Cancer	461	484
Heart disease and nephritis	1,245	1,331
Diarrhea and enteritis under 2 years	91	88

DEATHS FROM COMMUNICABLE DISEASES.

(6 Months.)

	1918.	1917.	1918. Non-residents.
Diphtheria	133	153	46
Scarlet fever	20	31	8
Measles	94	52	11
Typhoid fever	8	9	2
Whooping cough	82	9	3
Tuberculosis	654	593	46

CASES OF COMMUNICABLE DISEASES REPORTED.

(6 Months.)

	1918.	1917.	1918. Non-residents.
Diphtheria	1,877	1,976	369
Scarlet fever	812	933	167
Measles	5,766	4,349	74
Typhoid fever	41	68	5
Whooping cough	1,412	190	13
Tuberculosis	1,505	1,303	126

MONTHLY METEOROLOGICAL SUMMARY, MAY.

ATMOSPHERIC PRESSURE.

(Reduced to sea level; inches and hundredths.)

Mean, 29.93; highest, 30.27; date, 6; lowest, 29.35; date, 12.

TEMPERATURE.

Highest, 92; date, 2; lowest, 47; date, 20; greatest daily range, 26; date, 9; least daily range, 5; date, 28; normal for month, 65.8°.

PRECIPITATION.

Total this month, 1.94; snowfall, 0.0; greatest precipitation in 24 hours, 1.27; date, 2, 122; snow on ground at end of month, 0; normal for this month, 3.03.

WIND.

Prevailing direction, west; total movement, 7,115 miles; average hourly velocity, 9.9; maximum velocity (for five minutes), 38 miles per hour from northwest, on 22d.

WEATHER.

Number of days clear, 11; partly cloudy, 10; cloudy, 9; on which .01 inch or more of precipitation occurred, 9.

MISCELLANEOUS PHENOMENA (Dates of).

Auroras, 0; halos: solar, 1, 9, 11, 21, 27; lunar, 0; hail, 1; sleet, 0; fog, 0; thunderstorms, 1, 12; frost: light, —; heavy, —; killing, —.

GORGAS APPEALS FOR UNITED STATES SOLDIERS.

The campaign being inaugurated today by the army medical corps against promiscuous coughing, spitting and sneezing will be successful only through the closest and widest possible coöperation. Its success will mean a lower death rate for our soldiers and for the public generally, as well as better health for everybody.

The health of our soldiers depends to a great extent upon the health of the civil population, since soldiers contract contagious diseases in their homes and elsewhere and carry them to the camps.

We cannot make this campaign a success without the fullest coöperation of the united Press and its members in keeping constantly before our soldiers and the public the menace which promiscuous coughing, sneezing and spitting offers.

JULY, 1918

MONTHLY BULLETIN

HEALTH DEPARTMENT

OF THE

CITY OF BOSTON



FRANCIS X. MAHONEY, M. D., *Commissioner.*

STATISTICS FOR 1917.

Population		772,370	
Births	19,856	Birth rate	25.7
Deaths	12,721	Death rate	16.47
Of these total deaths 15 per cent were nonresidents.			

BOSTON
HEALTH DEPARTMENT
CITY HALL ANNEX
1918

HEALTH DEPARTMENT.

(Tel. Fort Hill 5100.)

Commissioner of Health.

Secretary	1109 City Hall Annex.
Publications	1109 City Hall Annex.
Licenses	1109 City Hall Annex.
Medical Division	1107 City Hall Annex.
Communicable Diseases	1107 City Hall Annex.
Child Hygiene	1108 City Hall Annex.
Health Unit	17 Blossom street.
Vaccination Station	17 Blossom street.
Detention Hospital	Southampton street.
Occupational Clinic	17 Blossom street.
Bacteriological Laboratory	1101 City Hall Annex.
Examination of Cultures	1101 City Hall Annex.
Wassermann Tests	1101 City Hall Annex.
Food Inspection Division	1110 City Hall Annex.
Inspection of Foodstuffs	1110 City Hall Annex.
Examination of Milk and Vinegar	1104 City Hall Annex.
Inspection of Dairies	1102 City Hall Annex.
Brighton Abattoir	Market street, Brighton.
Sanitary Inspection Division	1111 City Hall Annex.
Abatement of Nuisances	1111 City Hall Annex.
Examination of Gas Fitters	1111 City Hall Annex.
Vital Statistics Records and Accounts	1112 City Hall Annex.
Permits for Burial	1112 City Hall Annex.
Superintendent of Peddlers	27 North Grove street.

OFFICE HOURS.

The Health Department will be open from 9 a. m. to 10 p. m., except Saturdays, when the hours will be from 9 a. m. to 1 p. m. and from 5 p. m. to 10 p. m. Sundays and holidays, from 10 a. m. to 12 m. and from 5 p. m. to 10 p. m., for the reporting of cases of communicable diseases, issuing of burial permits, the distribution of antitoxins and vaccines, and the receiving of cultures and widals.

FREE WASSERMANN TESTS.

The Bacteriological Laboratory is prepared to examine free of expense blood specimens by the Wassermann test for syphilis. Tests are made each Tuesday, Wednesday, Thursday and Friday. Blood is drawn from patients in the laboratory each Monday, Tuesday, Wednesday and Thursday from 2 to 4 p. m.

MONTHLY BULLETIN

OF THE

HEALTH DEPARTMENT OF THE CITY OF BOSTON.

FRANCIS X. MAHONEY, M. D., *Commissioner of Health.*

All communications relating to this publication should be addressed to Editor, BULLETIN
OF THE HEALTH DEPARTMENT, BOSTON.

VOL. 7.

BOSTON, JULY, 1918.

NO. 7

Health Education is a Disease Preventive.

CHANGE IN HEALTH COMMISSIONERS.

Dr. F. X. Mahoney, who has been connected with the Health Department since 1910, first as a member of the Board of Health, later as chairman of the Board, and after the change in the city ordinance in 1916, which provided for the control of the department by one official, as Health Commissioner, has resigned his position, to take effect August 1, 1918.

Mayor Peters has appointed as his successor Dr. William C. Woodward, Health Officer of Washington, D. C. Doctor Woodward will take office August 1, 1918.

Doctor Woodward was born in Washington, D. C., December 11, 1867. He was graduated from the Washington High School in 1885, and from the University of Georgetown, with honors, as a Doctor of Medicine in 1889; from the same university as Master of Laws, and again as honor man, in 1900; and during 1889-90 took a post-graduate course in medicine at the University of Pennsylvania.

He was superintendent of the Washington Emergency Hospital in 1891; physician to the poor under the Health Officer of the District of Columbia in 1892; coroner, July, 1893, to August 1, 1894, when he assumed charge of the Health Department. He has been active in health matters, and has served as president of the American Public Health Association, also of the Conference of State and Provincial Boards of Health of North America, and of the American Association for the Study of the Prevention of Infant Mortality. He is a director of the American Society for the Control of Cancer;

honorary member of the American Veterinary Association, and of the International Association of Dairy and Milk Inspectors. He is a fellow of the American Medical Association; member of the General Medical Board of the Council of National Defence; the National Commission on Milk Standards and the National Tuberculosis Association.

He is now president of the District of Columbia Society of Medical Jurisprudence and vice president of the Society for Social Hygiene. He holds the chair of state medicine in the Medical Department of the University of Georgetown and the chairs of medical jurisprudence in the Law Department of the same university, in the Medical Department of the George Washington University and the Howard University.

DIPHTHERIA.

The total annual number of cases of diphtheria now occurring in Boston is less than a decade ago, but in recent years, although there have been noteworthy annual fluctuations in the number of cases, it cannot be said that progress toward further permanent reduction in the occurrence of this disease has been satisfactory.

During the year the curve of cases reported in the city weekly remains substantially the same. The smallest number of weekly cases reported occurs in August. Early in September they begin to rise. They take a decided jump soon after the opening of the schools, mount until January, and then continue along with more or less irregular fluctuations until about the first of June, when they fall abruptly and continue downward until the August minimum. While the diphtheria curve is more even in its course it corresponds in its general tendency with the curves of other contact diseases and with the prevalence of catarrhal conditions generally. Whatever effect school life, climatic or seasonal conditions or other factors may have on the spread of diphtheria, we possess a knowledge of and a power to control diphtheria that makes a consideration of the matters just mentioned of less practical importance than in the cases of other contact diseases.

Diphtheria is a disease to which most adults and young infants and a considerable proportion of children possess an absolute immunity. In the Shick test we have a simple method of telling inside of four or five days whether any given individual possesses such an immunity to diphtheria or not. If not, or if in doubt, we have the means of making that individual

immune by the administration of anti-toxin. It has been found that under present day conditions in Boston unrecognized cases of diphtheria, either pharyngeal or nasal, are the important factors in the spread of the disease. A comparatively simple laboratory procedure will show with reasonable degree of certainty within twenty-four hours whether any individual may have diphtheria or be a carrier of the organisms and a possible source of danger to others.

Whenever the well-known facts just enumerated are intelligently and energetically utilized to deal with a diphtheria outbreak where sick and exposed persons can be kept under close supervision the disease disappears. When diphtheria is scattered about in the general population of a large city the problem is, of course, somewhat different, and this is the form of the problem which we are called on to meet.

The number of individuals in this city capable of spreading diphtheria is now at the annual minimum. Experience has shown that sickness and deaths from diphtheria during the next ten months will depend very much on the extent to which existing foci of infection are permitted to multiply during the next six weeks, and this, in turn, must depend almost entirely on the extent to which the practising physicians of Boston may serve to bring about the detection of cases of diphtheria or of diphtheria carriers which would otherwise pass unrecognized.

In making its usual seasonal appeal to the physicians of Boston in whose hands this Bulletin is placed, the latter are reminded that this department is organized to furnish promptly laboratory reports of swab cultures from throats and noses in whatever number such reports may be requested; that it will supply personal diagnostic aid in any case in which such assistance may seem advisable; and that, in any event, it investigates every positive diphtheria culture with a view to discovering and eliminating the source of infection.

Physicians are urged, especially during the next two months, to examine both the nose and the throat in every case of illness in a child whom the physician may be called on to attend and to forward to the department swab cultures not only in cases showing suspicious clinical symptoms in the throat or nose but, in all cases, presenting marked pharyngeal inflammation or the occlusion of a nostril. Especially in cases clinically suspicious it is urged that examinations be secured of all other members of the family.

As has been noted, the seasonal prevalence of diphtheria coincides with the prevalence of catarrhal conditions of the

respiratory passages. From what we know about diphtheria immunity it would not seem that such catarrhal conditions play an important part in increasing individual susceptibility to diphtheria infection, but it may be set down as an axiomatic truth that a person is dangerous to others in direct proportion to the amount of poisonous secretions he scatters about and it is quite probable that a diphtheria "carrier" may be comparatively harmless until some superimposed catarrhal condition furnishes him with a secretion in which to distribute his Klebs-Loeffler bacilli. This possibility is always to be kept in mind in a search for a possible source of diphtheria infection. Individuals with pronounced catarrhal manifestations are always to be regarded as probable sources of danger to others and diphtheria is one of these possible dangers.

MAYOR'S COMMITTEE ON HOUSING.

CITY OF BOSTON,

OFFICE OF THE MAYOR, June 27, 1918.

To the Mayor's Committee on Housing (CHARLES LOGUE, *Chairman*); AMELIA H. AMES, VINCENT BROGNA, PHILLIP CABOT, EDWARD H. CHANDLER, J. RANDOLPH COOLIDGE, JR., JAMES E. MCCONNELL, EDWARD F. MCGRADY, REV. MICHAEL J. SCANLON, JAMES SOLOMANT.

In writing the above persons asking them to serve on the committee, the Mayor sent the following letter:

DEAR SIR OR MADAM:

I am appointing a committee of ten to study housing conditions in the City of Boston and I am anxious to have you serve on it. Mr. Charles Logue has consented to be the chairman.

In my inaugural address I pointed out that there is no work of greater importance than that of maintaining the proper facilities for the best health of the public. Sanitary housing conditions for the great mass of citizens are fundamental and essential in safeguarding their health. Proper sanitary and living conditions are matters upon which the city must insist, and there is no doubt that in our city housing conditions imperatively demand attention.

I expect the committee to investigate housing conditions in Boston and to report its findings without reserve; to determine whether the present laws are adequate to ensure the maintenance of the best living conditions and whether the present administrative organizations are sufficient to properly enforce

the law. If it is found that the existing laws are insufficient and ineffective, I expect the committee to recommend such changes in the law as are necessary to carry out whatever recommendations your body may deem wise to make that Boston's housing conditions may be second to those of no city in the land.

In your deliberations and your report I ask that you have only one thought before you — the greatest good for the people. I know that it is not necessary for me to say this, but I believe that no harm can flow from the continual emphasis of this point. Keep this thought ever before you, for it is the only foundation on which you can safely build for permanent good.

The work I ask you to do involves a responsibility of major importance. This I know you appreciate. That the work may begin at the earliest moment, I shall be glad to have your acceptance of the appointment as soon as possible.

Very truly yours,

ANDREW J. PETERS,
Mayor.

ACCIDENTAL DEATHS.

Elevator accidents contributed 24 deaths toward the mortality of the city's population in 1917. The number of deaths from the same cause in 1916 was 17. Fatal accidents of this character have occurred almost entirely in connection with the operation of freight elevators.

Accidental deaths from illuminating gas poisoning in 1917 were 60 as compared with 55 for 1916. In the early part of the present year deaths from this cause became so frequent as to lead this department to adopt additional measures for their prevention.

The greater use of gas for heating purposes, the freezing of gas pipes, defective gas tubing, imperfect gas fixtures, and the unsafe arrangement of stop cocks served to bring about the fatalities.

In comparison with the number of deaths from the above causes it may be noted that 81 fatal motor vehicle accidents occurred in the city during the year, while street cars were responsible for 30 fatalities. Steam railroads were accountable for 40 deaths and teams for 17. During this single year 225 people in Boston came to death from accidental falls, which furnish an annual casualty list of important proportions even in comparison with casualty lists from Europe.

COCKROACHES.

The insect commonly referred to as the cockroach is a variety (*Periplaneta Americana*) of the family Blattidæ, and one of the few species of this family which lives in close association with human beings. Cockroaches are very sensitive to the cold and consequently exhibit a partiality for kitchens and the vicinity of steam or hot water pipes. The young are hatched from eggs deposited by the mother in very dark places. Only one brood is usually hatched in this climate in a year. Before reaching full size the young moult several times and may live four or five years.

Like flies, cockroaches will feed on almost any kind of animal or vegetable matter. They will even eat woolen or other cloth and leather, and like rats may eat each other.

Cockroaches are objectionable for two reasons. Their excreta and secretions from a scent gland and from their mouths defile everything with which they come in contact, and give rise to a persistent disagreeable odor. Cockroaches are furthermore objectionable because they are dangerous to health. Like flies, they cause disease by mechanically distributing disease organisms and infecting food. Their smaller range of activity naturally tends to limit the variety of disease organisms to which they may gain access, but given an opportunity to eat or crawl over any material containing pathogenic organisms, cockroaches will transplant them just as surely as flies do. While as a factor in spreading diseases cockroaches are undoubtedly outweighed by flies, some recent investigations indicate that the former possess importance in this respect that has not been appreciated. Among the infections which may be spread by them, tuberculosis, through carelessness with respect to tubercular sputum, seems especially worthy of mention.

To rid a house effectively of cockroaches calls for a persistent systematic procedure which must include the whole house. There are various poisons on the market which they will eat, but they will detect and avoid many common poisons. Certain powders, including even powdered sulphur, tend to keep them away from a locality where such powders may be freshly scattered. Measures of this character often, however, serve only to drive them from one part of a building to another, and it may be necessary to secure the penetration of their retreats with the fumes of burning sulphur or with carbon disulphide or with hydrocyanic acid gas in order effectually to rid a building of their presence.

In attempting to keep a house free from these pests it is not to be forgotten that both warmth and food are necessary to their existence, and if their food supplies be cut off through protection of food and scrupulous cleanliness about kitchen and pantry they are not likely long to trouble the ordinary household.

VACCINATION AGAINST SMALLPOX AND TYPHOID FEVER.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY.

To persons in charge of establishments manufacturing war materials:

From the standpoint of health conservation and labor efficiency, it is imperative that such communicable diseases as smallpox and typhoid fever be prevented in all establishments manufacturing materials for the Federal Government. This is of special importance at the present time in view of the constant movement of labor from one locality to another, which facilitates so greatly the spread of disease.

The experience of every civilized country shows that complete protection is furnished against smallpox by vaccination, and temporary immunity against typhoid by inoculation with typhoid vaccine.

In order to prevent such diseases, upon the recommendation of the Surgeon General of the United States Public Health Service, persons in charge of plants engaged in the manufacture of war materials are urged to require every person employed under them to be vaccinated against smallpox and inoculated against typhoid fever, as now done in the case of our military forces.

The medical staff should be instructed to take the necessary steps for the enforcement of these measures. The need for them has already been demonstrated by the occurrence of isolated outbreaks of smallpox in establishments engaged in the production of war materials through imported labor. These outbreaks not only cause the quarantine of the personnel, but also interfere seriously with the production of materials necessary to the conduct of the war.

The Public Health Service is ready to coöperate in enforcing these measures, and any persons calling at any of the service stations will, on request, be vaccinated against smallpox or typhoid fever free of cost.

J. H. MOYLE, *Acting Secretary.*

THE HEALTHY INFANT.

The good mother is constantly interested in the baby's progress. A normal baby should show:

Gain in weight.

A good appetite with absence of vomiting and regurgitation of food.

Movements of the bowels normal as to number, color and consistency.

Alertness, wide-open eyes.

Little crying.

Unbroken sleep, with mouth and eyes closed.

Absence of discomfort or pain.

Indications of increasing intelligence.

A contented expression.

The rate of development is not the same with all children. Variations in this respect need cause no alarm unless pronounced.

THE SICK INFANT.

With indications of illness such as diarrhea, vomiting, high temperature, eruptions of the skin, nervousness and exhaustion, call in a physician immediately. By pursuing this course serious illnesses may be avoided. These symptoms may be only of slight consequence, but no time should be lost by the careful mother in enlisting the aid of a physician.

EFFECT OF FREEZING ON THE ORGANISMS OF TYPHOID FEVER AND DIPHTHERIA.

As the result of the occurrence during the summer of 1917 of an outbreak of diphtheria and one of typhoid fever, apparently due to infected ice cream, the Hygienic Laboratory of the United States Public Health Service has conducted some experiments which constitute a further contribution to our knowledge of the effect of freezing on the bacillus typhosus and the bacteria diphtheriae.

The details of the experiments which were conducted by Past Assistant Surgeon Bolten appear in "Public Health Report" for February, 1918.

Cream into which artificial cultures of the bacillus typhosus had been mixed was subjected to repeated freezing and thawing at varying intervals for more than ten weeks. While the process evidently tended to decrease the number of bacteria which might be obtained from the same amount of the mixture, yet, at the end of this time, it would appear that the bacteria remaining were sufficient in numbers and virulence to transmit typhoid fever.

Similar experiments with the diphtheria bacilli indicated that after repeated freezing and thawing these organisms suffered no impairment in virulence or other respects as compared with organisms from the original culture that had not been frozen at all.

REPORT OF THE BABY HYGIENE ASSOCIATION.

The Baby Hygiene Association for the first six months of 1918 cared for 4,711 babies. This is an increase of 23 per cent over the figures for the same period of last year. Last year the increase over the preceding year was only 13 per cent. Eight hundred sixty-six more babies have been cared for than in 1917. If during the remainder of the year the growth continues at the same rate as last year, the association will care for over 6,800 babies in the year 1918.

During the first six months of the year 480 medical conferences have been held, an increase of 78 over last year. The total conference attendance was 15,762, with an average of 33 per conference. This average conference attendance is slightly lower than last year, when the average was 36, but considering the great increase in number of conferences held the small attendance during the cold months of January and February, and the fact that there were three new stations, it is surprising that the average was not still lower.

The three new stations opened were: One in Jamaica Plain, one in Upham's Corner and a second station in East Boston. The large increase in number of babies cared for is not, however, entirely due to the new stations opened, as almost all the older stations show more babies cared for than in the first six months of 1917.

The number of visits by nurses for the first six months of the year was 35,012, an increase over last year of about 2,800. For the first six months of 1917 there were $97\frac{1}{2}$ months of nursing service, an average of a little more than 16 nurses a month. This year there have been $114\frac{3}{4}$ months of nursing service, with an average of 19 nurses a month.

Comparative statistics for the first six months of the last five years follow:

JANUARY 1 TO JUNE 30.

	1914.	1915.	1916.	1917.	1918.
Number of babies under supervision.....	2,613	3,130	3,370	3,825	4,711
Number of conferences.....	325	332	384	402	480
Total conference attendance.....	7,746	11,398	11,461	14,387	15,762
Average conference attendance.....	23	34	30	36	33
Visits made in homes by nurses.....	22,290	23,955	30,103	32,259	35,012

January 1 to June 30, 1915, number months nursing service (stations)	$76\frac{1}{2}$ months.
January 1 to June 30, 1916, number months nursing service (stations)	88 months.
January 1 to June 30, 1917, number months nursing service (stations)	$97\frac{1}{2}$ months.
January 1 to June 30, 1918, number months nursing service (stations)	$114\frac{3}{4}$ months.
Average of 19 nurses a month.	

INFANT MORTALITY FOR JULY.

Deaths in Boston of children under one year of age for the month of July, 1918, was 191, as compared with 125 for July, 1917. The increase is to be ascribed chiefly to a marked increase in deaths in Boston of nonresident children and to an increase in deaths from whooping cough and from pneumonia. There has also been some increase in deaths reported as being due to gastro-intestinal diseases.

The deaths of children under one year for the first six months of the year 1918 was 1,022, as compared with 990 for the same period in 1917.

As an index of the relative number of deaths attributed to congenital causes, the deaths of children during the first month of life was 82 for July, 1918, as compared with 76 for the same month in 1917.

MILK CAMPAIGNS.

Milk campaigns are being conducted in many sections of the country in an effort to promote the use of milk and to encourage the serving of more milk dishes. In this state, under the direction and supervision of the Food Administrator, a successful attempt has been made to call attention to the food value of this substance. Posters, newspapers and bottle caps were extensively used in this effort. The result has been a very satisfactory increased demand from the public for milk. This will benefit the consumer, and is, at the same time, pleasing to those who coöperated in this campaign. It was financed by a combination of producers and dealers. In New York home demonstration agents were employed to direct the attention of householders to the food value of milk. Graphic exhibits were also prepared and displayed in store windows and libraries. These methods met the expectations of the interested promoters. Indications point to a proper and increased recognition on the part of consumers of the importance of milk to a well balanced and economical food supply.

RECENT LEGISLATION.

Chapter 136 gives authority to the Secretary of the Commonwealth to appoint a state registrar of vital statistics at an annual salary of \$3,000. This official is to be under the direction of the Secretary of the Commonwealth and is to enforce all provisions of the law relating to the registry of births, marriages and deaths, and has power to prosecute where violations are found.

Chapter 237 amends chapter 386 of the Acts of 1908, which latter makes publicity illegal by advertisement, statement or notice concerning a venereal disease or of a disease, infirmity or condition of the sexual organs. Chapter 237 removes this prohibition for health authorities by allowing "the printing, publishing or distribution of any matter pertaining to venereal diseases by state or municipal health authorities."

Chapter 140 appropriates a sum not exceeding thirty thousand dollars to be expended by the State Department of Health, sub-

ject to the approval of the Governor and Council, for the control, suppression and treatment of venereal diseases.

Chapter 170 amends section 3 of chapter 256 of the General Acts of 1917 by striking out the word "two" in the sixth line and substituting the word "one." The act which was amended was one dealing with the classification and grading of milk and was intended to permit the sale of what was therein termed as "Grade A, Massachusetts Milk." It was the intention of the original act that boards of health of cities or towns should, upon application, cause milk to be tested for classification and stated that such examination was to be made "as prescribed by section two." This was apparently an error, as section two discusses the form of labeling and also makes it necessary that the percentage of milk fat should not be less than the Massachusetts legal standard. In conformity with the amendment, the milk must be tested under section one of the original act, and in accordance therewith milk of "Grade A" quality "shall consist exclusively of milk produced within this Commonwealth from healthy cows under cleanly and sanitary conditions and shall be so cooled and cared for that in its raw state the bacteria count shall not average more than one hundred thousand per cubic centimeter, upon examination of five samples taken consecutively, each from a different lot of milk on five separate days."

REPORT OF THE HEALTH UNIT FOR THE MONTH OF JULY, 1918.

Health Department.

Visits made by medical inspector:

Contagious	30
Tuberculosis	3
Ophthalmia	10
Miscellaneous	15
Total	<u>58</u>

Cases visited by nurses:

Medical	117
Babies	234
Total	<u>351</u>

Defective sanitary conditions found in tenement houses,	4
Calls by district physician from Boston Dispensary .	79

Instructive District Nursing Association.

Visits made by nurses	553
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Baby Hygiene Association.

Total number of babies cared for	188
New babies admitted	23
Babies readmitted	4
Conferences held	4
Total conference attendance	263
Home visits by nurses	443

Associated and Hebrew Federated Charities.

Cases investigated and assisted	3
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Consumptives' Hospital Department.

Calls by nurses in district	560
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SUMMARY OF VITAL STATISTICS.

There were 902 deaths reported in the month of July, against 861 in the corresponding period last year, a death rate of 13.54 against 13.13.

Reported deaths of nonresidents numbered 188, against 152 last year.

The principal decreases and the principal increases were:

Increases:

Diarrhea and enteritis (under 2 years)	21
Pneumonia	23

Decreases:

Tuberculosis (pulmonary)	36
Heart disease and nephritis	6
Puerperal diseases	6

There were 66 more deaths under 1 year, 71 more under 2 years and 72 more under 5 years.

NUMBER OF CASES AND DEATHS FROM COMMUNICABLE DISEASES FOR JULY.

	CASES.			DEATHS.		
	1918.		1917.	1918.		1917.
	Total.	Non-resident.	Total.	Total.	Non-resident.	Total.
Diphtheria.....	218	57	244	13	5	15
Scarlet fever.....	47	8	68	.....	.....	2
Measles.....	367	6	367	12	1	12
Typhoid fever.....	11	4	13	3	1	2
Whooping cough.....	180	3	107	15	3	1
Pulmonary tuberculosis.....	214	16	335	71	7	107

MORTALITY FOR JULY AND CORRESPONDING MONTH

	IN 1917.	1918.	1917.
Total deaths		902	861
Nonresidents		188	152
Rate		13.54	13.13
Corrected rate (nonresidents deducted)		10.72	10.80
Deaths under 1 year		191	125
Deaths under 2 years		234	163
Deaths under 5 years		271	199
Deaths over 60 years		221	216

CAUSES OF DEATH.

	Totals, 1918.	Non- residents, 1918.	Totals, 1917.
Cerebro-spinal meningitis	8	5	8
Diphtheria	13	5	15
Measles	12	1	12
Scarlet fever	—	—	2
Tuberculosis (pulmonary)	71	7	107
Tuberculosis (other forms)	18	4	17
Typhoid	3	1	2
Whooping cough	15	3	1
Accidental and violent	82	22	86
Heart disease, endocarditis, pericarditis and nephritis,	142	16	148
Bronchitis	—	—	2
Cancer	77	21	74
Diarrhea and enteritis (under 2 years)	55	17	34
Diarrhea and enteritis (2 years and over)	15	2	9
Erysipelas	6	—	4
Meningitis and encephalitis	9	2	6
Old age	5	—	3
Pneumonia	61	7	38
Premature birth	27	6	30
Puerperal diseases	7	2	13
Rheumatism	1	—	1
Syphilis	4	1	7
Influenza	—	—	—
Other causes	271	66	242

**The Following is a Summary of the Work Done by the
Different Divisions in the Department for July,
1918.**

CENTRAL DIVISION.

Stable hearing	1
Stable licenses approved (final)	2
Premises ordered vacated	8
Miscellaneous orders	5
Application lying-in hospital approved	5
Transfers (employers)	3
Appointment	1
Order rescinded (to reoccupy premises)	1
Dump application	1

Undertaker approved	1
Special draft	1
Temporary appointment	1
Prosecutions	5
Leaves of absence granted	2
Premises assigned	1

Licenses — Permits.

Milk licenses	48
Vehicles inspected and approved	410
Manicure — Massage	33
Numbers assigned	115
Licenses to peddle fruit and vegetables	73
Hen permits	98
Licenses renewed to remove grease, bones, etc.	81
Dump permit	1
Sundry licenses	2
Special permit (to remove milk)	1
Grease licenses granted	3
License revoked	1
Permit to reoccupy	1
Court cases	5
Fines	\$20

MEDICAL DIVISION.

Communicable Diseases.

Number of visits by medical inspectors	589
Antitoxin given	13
Deaths investigated	19
Cases brought to Boston for treatment	90
Vaccinations	27
Vaccination certificates	11
Antityphoid vaccine administered	1

Public Health Nursing.

Communicable disease visits	1,470
Number of revisits (infants)	3,397
Number of new babies visited	1,343
Total visits by nurses	<u>6,210</u>

BACTERIOLOGICAL LABORATORY.

Examinations for Diagnosis and Release.

Diphtheria	766
Tuberculosis	291
Typhoid	92
Gonorrhea	494
Gonorrheal ophthalmia	33
Syphilis	101
T. B. Comp. Fix. Test (special examinations)	808

Other examinations *	229
Bacteriological milk examinations	540
Bacteriological ice cream examinations	25
Bacteriological water examinations	4

FOOD INSPECTION.

Live Stock Inspected at Brighton Abattoir.

Cattle inspected	419
Calves inspected	641
Swine inspected	3,642
Parts condemned	192
Animals condemned	3
Stores inspected	1,291
Court cases	24
Fines	\$770

DAIRY INSPECTION.

Total number of sanitary inspections	764
Total number of cattle inspections	4,618
Total number of bacteriological inspections	627
Sanitary inspection of dairies	636
Sanitary inspection of milk depots, sanitary creameries	128
Dairy scoring above 50 points †	389
Dairy scoring below 50 points	257
Dairies with milk rooms	269
Dairies without milk rooms	367

MILK INSPECTION.

(Examinations as to Statute Requirements.)

Samples examined:

Chemical examinations of milk	1,280
Bacteriological examinations of milk	540
Bacteriological examinations of ice cream	25
Chemical examinations of vinegar	185
Chemical examinations of butter	7
Chemical examinations of ice cream	5
Miscellaneous examinations	5
Number of court cases	85
Fines	\$1,595

Inspection of Provisions — Articles Condemned.

Meat:

Poultry	3,378½ pounds
Veal	504 pounds
Veal plucks	5 pounds
Kidneys	1½ pounds
Beef	157 pounds
Lamb	356½ pounds
Corned beef	63½ pounds
Spare ribs	75 pounds

Meat:

Beef livers	74½ pounds
Pork	116½ pounds
Corned shoulder	51¾ pounds
Hamburg	23 pounds
Beef tongues	10 pounds
Beef shoulders	9 pounds
Pork shoulders	12 pounds
Squabs	27 pounds

* Urines for typhoid, 3; bone for T. B., 1; feces, 5; virulence, 1; organisms, 1; rabies, 3; kangaroo and catgut, 122; paratyphoids, 4; chipped beef, 1; candy, 4; sagor, 2; strauss, 1; rats, 13.

† Possible mark.

Fish:	
Mackerel	25 pounds
Salmon	75 pounds
Haddock	50 pounds
Hake	15 pounds
Miscellaneous:	
Cantaloupes	18 crates
Canned goods (miscellaneous)	200 cans
Grape juice	32 cases
Grape juice	72 bottles
Lime juice	34 bottles
Tonic	9 bottles
Pickles	35 bottles
Salad dressing	72 jars
Marmalade	3 jars
Mustard	1 jar

Miscellaneous:	
Raisins	50 pounds
Condensed milk	8,140 pounds
Condensed milk	100 cans
Evaporated milk	75 cans
Cake	16 pounds
Shredded wheat	93 packages
Bicarbonate soda	3,600 lbs.
Baking powder	98 cans
Plum pudding	48 packages
Potato chips	6 boxes
Raisins	50 pounds
Carrots	36 pounds
Onions	1 peck
Potatoes	21 pecks
Beets	1 peck

SANITARY INSPECTION.

New reports	6,848
Legal notices recommended	486
Reinspections	4,956
Nuisances reported	5,218
Complaints investigated	871
Court case	1
Fines	\$10

MORBIDITY AND MORTALITY.

(7 Months.)

	1918.	1917.
Total deaths	7,759	7,873
Nonresident deaths	1,186	1,139
Deaths under 1 year of age	1,205	1,115
Pneumonia	1,149	1,139
Cancer	538	558
Heart disease and nephritis	1,387	1,479
Diarrhea and enteritis under 2 years	146	122

DEATHS FROM COMMUNICABLE DISEASES.

(7 Months.)

	1918.	1917.	Non-residents.
Diphtheria	146	168	51
Scarlet fever	20	33	8
Measles	106	64	12
Typhoid fever	11	11	3
Whooping cough	97	10	6
Tuberculosis	725	700	53

CASES OF COMMUNICABLE DISEASES REPORTED.

(7 Months.)

	1918.	1917.	1918. Non- residents.
Diphtheria	2,095	2,220	426
Scarlet fever	859	1,001	175
Measles	6,133	4,716	80
Typhoid fever	50	81	9
Whooping cough	1,592	297	16
Tuberculosis	1,719	1,638	142

MONTHLY METEOROLOGICAL SUMMARY, JULY.

ATMOSPHERIC PRESSURE.

(Reduced to sea level; inches and hundredths.)

Mean, 29.97; highest, 30.28; date, 25; lowest, 29.67; date, 8.

TEMPERATURE.

Highest, 98; date, 23; lowest, 54; date, 9; greatest daily range, 24; date, 27; least daily range, 6; date, 13; normal for month, 71.3°.

PRECIPITATION.

Total this month, 2.64; snowfall, 0.0; greatest precipitation in 24 hours, 1.03; date, 30-31; snow on ground at end of month, 0; normal for this month, 3.36.

WIND.

Prevailing direction, southwest; total movement, 5,876 miles; average hourly velocity, 7.9; maximum velocity (for five minutes), 32 miles per hour from northwest, on 17th.

WEATHER.

Number of days clear, 9; partly cloudy, 11; cloudy, 11; on which .01 inch or more of precipitation occurred, 13.

MISCELLANEOUS PHENOMENA (Dates of).

Auroras, 0; halos: solar, 19, 31; lunar, 0; hail, 0; sleet, 0; fog, 0; thunderstorms, 7, 10, 11, 12, 14, 17, 19, 20, 30; frost: light, —; heavy, —; killing, —.

AUGUST, 1918

MONTHLY BULLETIN

HEALTH DEPARTMENT

OF THE

CITY OF BOSTON



WM. C. WOODWARD, M. D., *Commissioner.*

STATISTICS FOR 1917.

Population		772,370		
Births	19,856	Birth rate	25.7	
Deaths	12,721	Death rate	16.47	

The deaths and death rate stated above cover all deaths occurring in
Boston, of nonresidents as well as of residents.

BOSTON
HEALTH DEPARTMENT
CITY HALL ANNEX
1918

HEALTH DEPARTMENT.

(Tel. Fort Hill 5100.)

Commissioner of Health.

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MONTHLY BULLETIN

OF THE

HEALTH DEPARTMENT OF THE CITY OF BOSTON.

WILLIAM C. WOODWARD, M. D., *Health Commissioner.*

All communications relating to this publication should be addressed to the HEALTH COMMISSIONER, BOSTON, MASS.

VOL. 7.

BOSTON, AUGUST, 1918.

NO. 8

VENEREAL DISEASE CONTROL.

For the purpose of controlling venereal diseases Congress recently created by the Chamberlain-Kahn Act a so-called Inter-Departmental Social Hygiene Board, consisting of the Secretaries of War, Navy and Treasury, and the Surgeon Generals of the Army, Navy and Public Health Service.

By the provisions of the act the Board is authorized to recommend the general measures which the Army, Navy and Public Health Service shall adopt with a view to controlling venereal diseases, and to regulate the allotment and expenditure of money to states for use to the same end.

The act establishes in connection with the United States Public Health Service a Division of Venereal Diseases, in charge of which Assistant Surgeon General C. C. Pierce has been placed.

It is made by law the function of this division:

(1.) To study and investigate the cause, treatment and prevention of venereal diseases.

(2.) To coöperate with state boards or departments of health for the prevention and control of such diseases within the states.

(3.) To control and prevent the spread of these diseases in interstate commerce.

Provision is made for the expenditure of \$1,000,000 by the Army and Navy, and in addition, \$1,400,000 is made available for disbursement through other agencies. Of this latter amount it is planned that \$1,000,000 may be distributed among the different states in proportion to their respective populations, to be expended under the direction of their State Departments of Health. In accordance with this arrangement, the State of

Massachusetts has been allotted \$36,603 for this year. In addition, the State of Massachusetts itself has appropriated \$30,000 to be expended by the Department of Health in connection with the control of venereal diseases; and in the department a Division of Venereal Diseases has been created, to take charge of which Maj. Alex. Thompson, M. R. C., has been assigned by the War Department.

The Massachusetts Department of Health is utilizing available appropriations in the following-named ways:

(1.) To secure observance of the recently promulgated regulation requiring physicians to report cases of syphilis and gonorrhœa by number, and to report by name patients who have neglected treatment for sixty days.

(2.) To place instructive literature into the hands of patients, utilizing practising physicians for this purpose.

(3.) To follow up and endeavor to place under treatment patients who are reported as neglecting treatment.

(4.) To locate and secure appropriate treatment for persons who from information obtained in various ways appear to be foci of infection.

(5.) To give public instruction in venereal diseases by the distribution of literature, public lectures and moving picture exhibitions.

(6.) To encourage employers of labor throughout the state to instruct and secure instruction for their employees concerning venereal diseases.

(7.) To manufacture arsphenamine.

(8.) To secure the establishment of dispensaries for the treatment of venereal diseases in all the larger centers of population in the state.

(9.) To subsidize certain dispensaries which have been designated as agents of the State Department for the distribution and for administration of arsphenamine.

DECAY OF TEETH DURING PREGNANCY.

The tendency of teeth of pregnant women to decay has long been a matter of common knowledge and has even given rise to an old saying that a woman loses a tooth for every child. The cause of such breaking down of tooth structure, loosening of fillings, and decay is primarily the demand of the foetal child for lime salts for its bones and other tissues, which tends to leave the mother an inadequate supply for the maintenance of her teeth and other hard tissues in a normal condition. It is

probable, too, the decay of the teeth is promoted by abnormal conditions of the saliva and other secretions which may be found in the mouth, particularly as a result of the vomiting of pregnancy. The logical preventive is a diet liberal in lime salts and this can practically be secured by increasing the amount of milk. Fresh vegetables also, particularly carrots, turnips, beets and beans, help toward the same end. Under the direction of a physician the safety of the teeth may perhaps be further assured by the use of lime salts directly, in some assimilable form. The deleterious effects of the direct action of abnormal secretions of the mouth, particularly those incident to vomiting, may be counteracted by the frequent use of alkaline mouth washes.

INFESTATION OF CANDY BY INSECTS.

The Bureau of Entomology, United States Department of Agriculture, has, at the request of the Health Commissioner and in coöperation with the Food Division of the Health Department, begun an investigation to discover methods whereby losses resulting from the infestation of candy by insects can be prevented. The manufacturers of candies are coöperating in the investigation, as they are largely interested in the discovery of methods that will enable them to diminish such losses in so far as they may be due to factory conditions and enable retailers to prevent the attacks of insects on the candies in their possession between the time such candies are received from the manufacturers and the time when they are sold.

Under instructions from Prof. L. O. Howard, Chief of the Bureau of Entomology, Mr. E. A. Back, in charge of stored product insect investigations, recently visited Boston and in company with Dr. Frederick A. Stiles of the Food Division of the Health Department visited a number of candy houses and factories. The chief cause of insect attacks was found to be the nuts used in candy manufacture. Nuts coming into the establishment from cold storage or the docks bring with them, it was reported, large numbers of the larvæ of the common nut moths, technically known as *Plodia interpunctella* and *Ephestia cautella*. Such larvæ develop in the factory into the moth stage and are liable to spread through all parts of the establishment. The investigation has not yet extended into the retail establishments where the finished candies are sold, but a similar development of the larvæ and an extension of infestation through the moths seems probable there also. The

precautions that have been taken have not altogether prevented the inroads of these moths, as is shown by the extent to which infestation occurs. The investigation, it is expected, will develop better methods of prevention that will be of material value to manufacturers and retailers.

The original infestation of English walnuts occurs in California. The original infestation of almonds takes place in Spain.

The approach of cold weather limits the possibility of the further active pursuit of this inquiry at the present time, and disturbed working conditions due to the presence of influenza throughout the country render it more difficult than usual to pursue the inquiry. The Bureau of Entomology is, too, more than ordinarily busy because of service it is rendering the military forces. It is promised, however, that the investigation will be pursued next spring, when the weather again becomes favorable to the development of the moths.

ANTHRAX.

Within the past few years it has not been unusual to see reference in the newspapers to the occurrence in Boston and vicinity of a disease called anthrax. Recently it was reported from another part of the country that several cases of anthrax had been caused by shaving brushes. Many who have seen such references to this unfamiliar disease have been led to ask: "What is anthrax, anyway?" and "Why didn't we ever hear of it before the war?"

Anthrax is primarily a disease of cattle and sheep, common in many foreign countries, but thus far relatively uncommon among such animals in this country. It is caused by a microscopic organism which was among the first of the disease organisms discovered. It is notable also for another reason: In the course of the growth of the anthrax organisms — or anthrax bacilli, as they are technically called — they form hard "spores," or what might almost be called seed, protected by a capsule that makes them very resistant to the agencies which ordinarily destroy disease organisms. The introduction of either the living organisms or these spores into a susceptible animal causes a local infection which is very likely to be followed by a general poisoning or toxæmia affecting the entire body. Such an infection may take place through an abrasion of the skin and give rise to a local abscess or pustule, often reaching a very large size; or infection may result from breathing the organisms or their spores into the lungs, or from swallowing them with food.

Animals vary in their susceptibility to infection with anthrax organisms. Some animals cannot contract the disease at all. Horses and swine are susceptible, but much less so than cattle and sheep. Dogs and birds may be infected, but only with great difficulty, even when deliberate attempts at infection are made. Man may be infected either through the skin, lungs or stomach. He possesses, however, a high resistance to the poisonous action of anthrax organisms, and when infected through the skin stands a good chance of recovery under appropriate treatment. Anthrax in human beings is usually contracted from animals, most commonly from handling the hides, wool, hair or other parts of animals which have had the disease, the spores usually serving as the means of transmission.

For many years the United States Government, for the protection of both animals and human beings in this country, has taken elaborate precautions to prevent the importation of infected hides, through supervision by United States consuls of the shipment into the United States of hides from countries where anthrax prevails. Since the beginning of the present war, however, difficulties have arisen in tracing the primary foreign origin of hides, in securing efficient disinfection of hides abroad and in other ways, and these difficulties, coupled with an increased demand for hides here, have tended to break down the protective system. Human cases of anthrax have as the result become more common in this country. Such cases have occurred chiefly among longshoremen and teamsters engaged in unloading ships and among workers in tanneries and leather factories. During the year 1917, fifty-four cases of anthrax were reported in Massachusetts, most of them in the vicinity of Boston. So far this year, however, only fourteen cases have been reported.

The recent discovery of infected shaving brushes as a substantial health menace was apparently not anticipated, as is shown by the fact that no regulations for the prevention of infection through shaving brushes as such were in force when the discovery was made. Such brushes are, it appears, ordinarily made of horse hair, with sometimes an outer layer of imitation badger hair. Infection is presumably introduced with the horse hair. The Federal Government has taken steps, therefore, to prevent the use hereafter of infected hair. It will be impracticable for the Government, however, to reach out and condemn on suspicion, or to sterilize, every shaving brush on the market when the possibility of the spread of anthrax through shaving brushes was first recognized. Such brushes

should be sterilized by the seller or the buyer before the brush is used. The procedure recommended by the Federal Government is soaking for four hours at a temperature of 110 degrees Fahrenheit in a mixture of a 40 per cent solution of formaldehyde, one part, and water, nine parts, and the agitation of the brush so that the contact of the solution with every individual hair or bristle will be assured.

In view of the ease with which anthrax bacilli or their spores may be introduced into the system from an infected shaving brush through any of the chance abrasions and cuts that are so common in shaving, it would seem to be the part of wisdom on the part of the purchasers of such brushes to see that before being used they have been disinfected according to the formula set forth above or according to some other formula equally effective. If they bear no mark of a reputable manufacturer certifying to their safety, then the purchaser should himself see to the necessary disinfection; or if facilities for doing so are not conveniently at hand, he may probably for reasonable compensation procure the necessary service from the druggist from whom the brush is purchased.

GLASS IN FOOD PRODUCTS?

Rumors of the presence of ground glass in sweet chocolate have been found to have little basis in fact. According to the "Monthly Review" of the Bureau of Chemistry, United States Department of Agriculture, July, 1918, Part 1, from the testing of about 150 pounds of product only one piece of glass was detected, although there were several stones, iron filings and particles of coal. The trouble was due to the use of peanuts supposed by the manufacturer to have been hand picked, but which contained considerable refuse such as was found in this commodity.

Since the wide publicity of the original complaint, many samples of foodstuffs have been examined at the laboratory connected with the Boston Health Department which were alleged to contain glass. In no instance were these complaints shown to have substantial basis.

Similar examinations in the laboratory connected with the Health Department at Washington, D. C., revealed occasionally particles of glass, but only with such frequency and under such conditions as indicated accidental contamination. In no case was there the slightest reason for believing that glass had been deliberately introduced.

REPORT OF THE HEALTH UNIT FOR THE MONTH OF AUGUST, 1918.

Health Department.

Visits made by medical inspector:

Contagious	21
Tuberculosis	1
Ophthalmia	8
Miscellaneous	13
	<hr/>
Total	43
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Cases visited by nurses:

Medical	58
Babies	404
	<hr/>
Total	462
	<hr/>

Defective sanitary conditions found in tenement houses,	12
Calls by district physician from Boston Dispensary .	90

Instructive District Nursing Association.

Visits made by nurses	640
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Baby Hygiene Association.

Total number of babies cared for	197
New babies admitted	28
Babies readmitted	4
Conferences held	5
Total conference attendance	406
Home visits by nurses	521

Associated and Hebrew Federated Charities.

Case investigated and assisted	1
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Consumptives' Hospital Department.

Calls by nurses in district	387
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SUMMARY OF VITAL STATISTICS.

There were 834 deaths reported in the month of August, against 895 in the corresponding period last year, a death rate of 12.52 against 13.64.

Reported deaths of nonresidents numbered 144, against 153 last year.

The principal decreases and the principal increases were:
Increases:

Cancer	31
Prematurity	6
Whooping cough	5

Decreases:

Accidental and violent	35
Diphtheria	9
Heart disease and nephritis	17
Measles	10
Pneumonia	17
Puerperal diseases	5

There were 8 less deaths under 1 year, 2 less under 2 years, 13 less under 5 years and 14 more over 60 years.

NUMBER OF CASES AND DEATHS FROM COMMUNICABLE DISEASES FOR AUGUST.

	CASES.			DEATHS.		
	1918.		1917.	1918.		1917.
	Total.	Non-resident.	Total.	Total.	Non-resident.	Total.
Diphtheria.....	137	25	233	9	2	18
Scarlet fever.....	29	5	47	1		2
Measles.....	96	1	127			10
Typhoid fever.....	19	2	34	1		3
Whooping cough.....	149	5	124	17	1	12
Pulmonary tuberculosis.....	237	37	225	87	7	91

MORTALITY FOR AUGUST AND CORRESPONDING MONTH IN 1917.

	1918.	1917.
Total deaths	834	895
Nonresidents	144	153
Rate	12.52	13.64
Corrected rate (nonresidents deducted)	10.36	11.31
Deaths under 1 year	178	186
Deaths under 2 years	225	227
Deaths under 5 years	255	268
Deaths over 60 years	234	220

CAUSES OF DEATH.

	Totals, 1918.	Non- residents, 1918.	Totals, 1917.
Cerebro-spinal meningitis	3	—	6
Diphtheria	9	2	18
Measles	—	—	10
Scarlet fever	1	—	2
Tuberculosis (pulmonary)	87	7	91
Tuberculosis (other forms)	17	8	15
Typhoid	1	—	3
Whooping cough	17	1	12
Accidental and violent	53	10	88
Heart disease, endocarditis, pericarditis and nephritis, .	130	18	147
Bronchitis	1	—	4
Cancer	95	15	64
Diarrhea and enteritis (under 2 years)	83	17	95
Diarrhea and enteritis (2 years and over)	7	1	19
Erysipelas	1	—	3
Meningitis and encephalitis	8	—	6
Old age	2	1	3
Pneumonia	23	5	40
Premature birth	30	4	24
Puerperal diseases	6	1	11
Rheumatism	—	—	4
Syphilis	2	—	6
Anterior poliomyelitis	—	—	1
Other causes	258	54	223

**The Following is a Summary of the Work Done by
the Different Divisions in the Department for
August, 1918.**

CENTRAL DIVISION.

Stable hearing	1
Stable license approved (final)	1
Premises ordered vacated	2
Miscellaneous orders	6
Application lying-in hospital approved	1
Transfers effected	2
Appointment	1
Order rescinded (to reoccupy premises)	2
Dump applications	2
Cemetery hearing	1
Undertaker appointed	1
Temporary appointments	2
Prosecutions	31

Licenses — Permits.

Milk licenses	65
Vehicles inspected and approved	470
Manicure — Massage	10
Numbers assigned	87

Licenses to peddle fruit and vegetables	80
Hen permits	69
Licenses renewed to remove grease, bones, etc.	83
Sundry licenses	3
Grease licenses granted	83
Court cases	10
Fines	\$48

MEDICAL DIVISION.

Communicable Diseases.

Number of visits by medical inspectors	482
Antitoxin given	17
Deaths investigated	37
Cases brought to Boston for treatment	83
Vaccinations	193
Vaccination certificates	28
Antityphoid vaccine administered	17

Public Health Nursing.

Communicable disease visits	709
Number of revisits (infants)	3,963
Number of new babies visited	1,097
Total visits by nurses	<u>5,769</u>

BACTERIOLOGICAL LABORATORY.

Examinations for Diagnosis and Release.

Diphtheria	545
Tuberculosis	239
Typhoid	77
Gonorrhea	539
Gonorrheal ophthalmia	41
Syphilis	618
T. B. Comp. Fix. Test (special examinations)	618.
Other examinations *	174
Bacteriological milk examinations	550
Bacteriological water examinations	7

FOOD INSPECTION.

Live Stock Inspected at Brighton Abattoir.

Cattle inspected	223
Calves inspected	297
Swine inspected	2,903
Parts condemned	194
Animals condemned	2
Stores inspected	1,104
Court cases	21
Fines	\$330

* Paratyphoid, 6; powdered gelatine for coli, 1; urine for typhoid, 2; feces for typhoid, 2; mushrooms for toxin, 1; malaria, 7; anthrax, 1; rats, 141; G. U. T. B., 13.

DAIRY INSPECTION.

Total number of sanitary inspections	1,068
Total number of cattle inspections	6,739
Total number of bacteriological inspections	807
Sanitary inspection of dairies	963
Sanitary inspection of milk depots, country creameries	105
Dairy scoring above 50 points *	521
Dairy scoring below 50 points	442
Dairies with milk rooms	418
Dairies without milk rooms	545

MILK INSPECTION.

(Examinations as to Statute Requirements.)

Samples examined:	
Chemical examinations of milk	1,206
Bacteriological examinations of milk	550
Chemical examinations of vinegar	72
Chemical examination of butter	1
Chemical examinations of ice cream	13
Miscellaneous examinations	15
Number of court cases	47
Fines	\$630

Inspection of Provisions — Articles Condemned.

Meat:	Miscellaneous:
Poultry 6,089 pounds	Eggs 3½ dozen
Veal 219 pounds	Cheese 40 pounds
Beef 378½ pounds	Sauerkraut 1,488 cans
Lamb 105 pounds	Potatoes 30,000 pounds
Calves' liver 50 pounds	Raisins 25 pounds
Pork 78 pounds	Apricots 10 pounds
Smoked shoulder 44 pounds	Pears 78 boxes
Frankfurts 19 pounds	Peaches 100 crates
Beef livers 55 pounds	Rice flour 65 bags
Fish 63 pounds	
Crab meat 8 cans	

SANITARY INSPECTION.

New reports	6,756
Legal notices recommended	725
Reinspections	5,113
Nuisances reported	4,789
Complaints investigated	759
Court cases	3
Fines	\$50

* Passable mark.

MORBIDITY AND MORTALITY.

(8 Months.)

	1918.	1917.
Total deaths	8,618	8,768
Nonresident deaths	1,330	1,292
Deaths under 1 year of age	1,386	1,301
Pneumonia	1,172	1,179
Cancer	634	622
Heart disease and nephritis	1,522	1,626
Diarrhea and enteritis under 2 years	229	217

DEATHS FROM COMMUNICABLE DISEASES.

(8 Months.)

	1918.	1917.	1918. Non- residents.
Diphtheria	155	186	53
Scarlet fever	21	35	8
Measles	106	74	12
Typhoid fever	12	14	3
Whooping cough	114	22	7
Tuberculosis	814	791	60

CASES OF COMMUNICABLE DISEASES REPORTED.

(8 Months.)

	1918.	1917.	1918. Non- residents.
Diphtheria	2,232	2,453	469
Scarlet fever	889	1,048	180
Measles	6,228	4,843	81
Typhoid fever	69	115	12
Whooping cough	1,741	421	21
Tuberculosis	2,018	1,863	174

MONTHLY METEOROLOGICAL SUMMARY, AUGUST.

ATMOSPHERIC PRESSURE.

(Reduced to sea level; inches and hundredths.)

Mean, 30.04; highest, 30.46; date, 19; lowest, 29.73; date, 9.

TEMPERATURE.

Highest, 96; date, 14; lowest, 53; date, 18; greatest daily range, 26; date, 13; least daily range, 4; date, 10; normal for month, 68.9°.

PRECIPITATION.

Total this month, 1.56; snowfall, 0.0; greatest precipitation in 24 hours, 0.71; date, 9; snow on ground at end of month, 0; normal for this month, 0.

WIND.

Prevailing direction, southwest; total movement, 5,997 miles; average hourly velocity, 8.1; maximum velocity (for five minutes), 38 miles per hour from northwest, on 14th.

WEATHER.

Number of days clear, 10; partly cloudy, 10; cloudy, 11; on which .01 inch or more of precipitation occurred, 8.

MISCELLANEOUS PHENOMENA (Dates of).

Auroras, 15, 16; halos: solar, 0; lunar, 0; hail, 7; sleet, 0; fog, 12, 13, 31; thunderstorms, 7, 9, 14, 24; frost: light, —; heavy, —; killing —.

DO NOT DESTROY.

When you have no further use for this
Bulletin give it to someone else.

“Next to the duty of doing everything possible for the soldiers at the front, there could be, it seems to me, no more patriotic duty than that of protecting the children.”

President Wilson.

SEPTEMBER, 1918

MONTHLY BULLETIN

HEALTH DEPARTMENT

OF THE

CITY OF BOSTON



WM. C. WOODWARD, M. D., *Commissioner.*

STATISTICS FOR 1917.

	Population	772,370		
Births	19,856	Birth rate	25.7	
Deaths	12,721	Death rate	16.47	

The deaths and death rate stated above cover all deaths occurring in Boston, of nonresidents as well as of residents.

BOSTON
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CITY HALL ANNEX
1918

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VOL. 7.

BOSTON, SEPTEMBER, 1918.

NO. 9

INFLUENZA IN BOSTON.

The first definite historical record of influenza is that of the pandemic of the disease, which prevailed in Europe in 1510. From the many detailed descriptions of its clinical aspects, it is evident that the type of influenza in that pandemic was strikingly like that now seen in this country; the mortality was comparatively high; pneumonia was frequent, presenting the same features as the pneumonias in the present epidemic; and a tendency towards bleeding from the nose and lungs is recorded, an accompaniment of the disease which has not been particularly noted in more recent epidemics prior to the present one. From the time just named, well recognized epidemics of influenza have spread over the world at irregular intervals. In the eighteenth century, a severe epidemic prevailed in Europe in 1743, which reached America in 1761. In 1761 and 1762, epidemics occurred in portions of Europe which had previously escaped. Twenty years later, in 1781 and 1782, the disease again appeared in Asia and in Europe, and during 1788 and 1789 epidemics occurred in Europe and again extended to America. Pandemics extending to America occurred in 1802-03, in 1830-33, in 1836-37, in 1847-48, and in 1889-90, with more or less epidemic prevalence of the disease in 1850-51, in 1855-58, in 1874-75, and for several years following the outbreak of 1889.

Epidemic of 1918, in Boston.—As early as the Autumn of 1917, indefinite reports of the prevalence of influenza in epidemic form in certain parts of Europe began to filter through the

military censors, and by the beginning of the Summer just past it had become evident that the disease in epidemic form was prevailing or had occurred in Spain, France, Switzerland, Germany, Great Britain and Ireland, and to a considerable extent in both armies on the Western front. Judging from reports which have reached us from military hospitals in Europe, the prevailing type of the disease was not particularly severe, and the tendency to pneumonia and death was not especially marked, except, according to one report, where the sick were crowded together.

About the 1st of July of the current year, convalescent cases of influenza began to be seen more or less frequently among members of the crews of transports and other vessels arriving in Boston from European ports, as the result of attacks of the disease on shipboard. The number of such cases was usually about four or five, but in one or two instances was between twenty and twenty-five. Up to the present time, however, no passenger nor member of the crew of any such ship has been found to be sick enough on arrival to require removal to a hospital, and no deaths from influenza during the voyage have been reported on ships arriving in Boston. Notwithstanding the occurrence of such cases among passengers and members of crews on incoming vessels, no case of influenza was seen at the United States Immigration Station, where arriving passengers and members of crews were constantly being detained, until September 12, after the outbreak in the City of Boston had begun.*

There is no evidence to show exactly when the recent epidemic of influenza began in Boston. The disease was not made reportable by the State Department of Health until October 4, 1918, long after the presence of the disease had been well recognized. Case reports are, therefore, not available to show when influenza first appeared.

Inquiries made among physicians, at the instance of the Health Department, have elicited the interesting fact, however, that typical cases of influenza were seen with notable frequency

* At the United States Immigration Station, three cases of influenza occurred among persons just brought in, on September 12. The station is used for the detention of persons arrested under various United States laws and war regulations, as well as for the detention of passengers and members of crews of incoming vessels. One of the patients who became ill with the disease on the date just named was a person arrested in the vicinity of Boston by the Federal authorities, another was a negro stowaway from the steamer "San Jose," from the West Indies, and the third was a negro sailor from Providence. Notwithstanding the occurrence of these three cases at the station, no other case was recognized there until twelve days later, when, on September 24, 60 per cent of the inmates were taken sick within twenty-four hours, presenting symptoms of influenza, and showing temperatures

in private practice in this vicinity during the month of August, but the physicians who saw cases of this kind report that apart from subsequent prostration no serious complications or after effects were present. While the presence of influenza during the month of August might well have called for special notice, because of the season of the year, yet it must be remembered that influenza even in a fatal form is more or less constantly present. It may be pointed out that during the current year forty deaths from influenza were reported during the first six months, although no deaths were reported during the months of July and August. A table showing the number of deaths from influenza each year since 1889 follows, and serves to show the extent or the malignancy of the disease, or both, since influenza first became a factor in our modern morbidity and mortality tables.

Not only is influenza as such absent from the death records of Boston during the months of July and August of the current year, but the number of deaths recorded as due to pneumonia shows no increase suggestive of the prevalence of pneumonia of a serious type. An increase in the number of deaths recorded as due to pneumonia is apparent during the month of July, 1918, when comparison is made with the record for the same month in 1917; but during the month of August and the first week in September, 1918, deaths from pneumonia diminished as compared with the numbers reported during July, and also as compared with the numbers of deaths reported during the corresponding period of the preceding year, as appears from the table on page 183.

ranging from 100 degrees Fahrenheit upwards. The origin of this latter outbreak was not determined. On the one hand, it was customary to permit visitors to call on the inmates of the station daily, and influenza may have been brought in by some such visitor. On the other hand, however, on the night before the outbreak, a person arrested by the Department of Justice was through an oversight placed in the station without the usual preliminary physical examination, and a few hours later was found to have a beginning influenza. This patient was promptly isolated, but he may have infected the other inmates of the station, although the medical officers at the station regard it as hardly probable that he had an opportunity of doing so. The type of the disease that presented itself during this outbreak was varied. In some cases, the symptoms entirely disappeared within twenty-four hours. Others ran the course of typical cases of influenza. Some developed pneumonia. Two died.

Influenza and Pneumonia (All Forms): Number of Deaths Reported from Each Disease in Boston Since 1889, and in Massachusetts and the Registration Area of the United States Since 1913, Arranged According to Years.

BOSTON, MASS.			STATE OF MASSACHUSETTS.			UNITED STATES.		
INFLUENZA AND PNEUMONIA DEATHS, 1889 TO 1918, INCLUSIVE.			INFLUENZA DEATHS AND PNEUMONIA DEATHS, 1913 TO 1917, INCLUSIVE.			INFLUENZA AND PNEUMONIA DEATHS, 1913 TO 1917, INCLUSIVE. REGISTRATION AREA.		
Year.	Influenza.	Pneumonia.	Year.	Influenza.	Pneumonia.	Year.	Influenza.	Pneumonia.
1889.....	.....	934						
1890.....	24	1,092						
1891.....	31	1,149						
1892.....	97	1,122						
1893.....	68	1,540						
1894.....	56	1,119						
1895.....	69	1,268						
1896.....	15	1,387						
1897.....	34	1,236						
1898.....	29	1,169						
1899.....	49	1,455						
1900.....	215	1,241						
1901.....	166	1,099						
1902.....	20	1,115						
1903.....	83	1,265						
1904.....	65	1,323						
1905.....	73	1,274						
1906.....	40	1,331						
1907.....	93	1,233						
1908.....	59	1,299						
1909.....	62	1,262						
1910.....	69	1,376						
1911.....	46	1,334						
1912.....	27	1,405						
1913.....	27	1,452	1913.....	204	6,112	1913.....	7,725	83,778
1914.....	12	1,385	1914.....	129	5,987	1914.....	6,014	83,804
1915.....	37	1,456	1915.....	232	6,448	1915.....	10,768	89,326
1916.....	80	1,631	1916.....	539	6,567	1916.....	18,886	98,334
1917.....	51	1,605	1917.....	494	6,295	1917.....		
1918 to Oct. 26, 1918..	3,307	2,110						

Broncho and Lobar Pneumonia: Deaths Reported by Weeks During July and August, 1917, with Corresponding Figures for 1918.

WEEK ENDING. (In 1917.)		BRONCHO-PNEUMONIA.		LOBAR PNEUMONIA.		ALL PNEUMONIAS.	
		1917.	1918.	1917.	1918.	1917.	1918.
July	7.....	4	6	5	9	9	15
	14.....	7	9	3	8	10	17
	21.....	3	8	5	8	8	16
	28.....	1	3	8	7	9	10
August	4.....	7	5	4	5	11	10
	11.....	7	2	3	5	10	7
	18.....	4	4	5	3	9	7
	25.....	5	2	4	2	9	4
September	1.....	1	2	6	2	7	4
	8.....	6	4	8	4	14	8
Totals.....		45	45	51	53	96	98

Public attention was first directed to influenza in this vicinity by the apparently sudden appearance during the week ending August 28 of about fifty cases at the naval station at the Commonwealth Pier, and during the next two weeks over 2,000 cases occurred in the naval forces in the First Naval District. Of the patients removed to hospitals, over 5 per cent developed broncho-pneumonia, with a mortality of over 60 per cent in such cases. To what extent, if any, cases of influenza had been occurring at the Commonwealth Pier or at other stations in the First Naval District prior to the appearance of the cases the week of August 28, no information is at present available. A sudden and very significant increase reported the third week in August in the number of cases of pneumonia occurring in the army cantonment at Camp Devens in this district seems, however, to justify a suspicion that an influenza epidemic may have started among the soldiers there even before it appeared in the naval forces.

The outbreak of influenza in the naval force at the Commonwealth Pier was followed in less than a week by similar sudden outbreaks both in the aviation schools and among the naval radio men at the Institute of Technology in Cambridge. Curiously, the early cases seemed to be more prevalent among the men living outside than among those quartered in the

barracks at the Institute. The incidence of the disease here was apparently somewhat higher than at the Commonwealth Pier.

The first death from influenza in the civilian population recorded after July 1, 1918, occurred September 8, and on the same day a death occurred in the naval forces and another in the merchant marine stationed in Boston. And because of the oral statements of practising physicians referred to, it may be presumed, therefore, that influenza was more or less prevalent and widely distributed just prior to September 8, 1918, but how long it had been prevalent, or how prevalent it had been, is not of record and does not appear to be definitely ascertainable.

And while influenza was not made reportable by state regulations until October 4, 1918, during the height of the epidemic, in view of the enormous pressure under which physicians were then working, many of them probably did not even learn of the time of the reportability of influenza, and probably all of them were too busy to send in reports of either their influenza or their pneumonia cases. Such deductions as are to be made concerning the outbreak must be drawn, therefore, from the reported fatal cases, concerning which the records are probably complete.

Although, as has been stated, no deaths due to influenza were reported prior to September 8, 1918, on that date three deaths occurred; and by the end of the week, September 14, nineteen deaths were of record, attributed to the disease. Deaths from lobar pneumonia and broncho-pneumonia rose, too, during the week to twenty-seven, as compared with eight during the week previous. The subsequent course of the disease is shown by the following statement setting out the number of deaths from influenza and from all forms of pneumonia, arranged according to dates of death, and the number of cases of influenza and lobar pneumonia, arranged according to dates when reports were filed.

Influenza and Pneumonia in Boston: Cases Reported and Deaths by Date of Death from September 7, 1918, to Saturday, November 9, 1918.*

DATE.	CASES REPORTED.		DEATHS REPORTED.		Total Deaths.
	Lobar Pneu- monia.	Influ- enza.	Pneu- monia, All Forms.	Influ- enza.	
September 7.....			2		2
8.....			3	2	5
9.....	3		4	4	8
10.....	3		7	2	9
11.....	8		5	3	8
12.....	2		7	8	15
13.....	3		12	4	16
14.....	7		20	11	31
† 15.....			9	15	24
16.....	13		14	29	43
17.....	20		10	28	38
18.....	22		7	44	51
19.....	22		18	53	71
20.....	21		21	54	75
21.....	23		22	54	76
† 22.....			19	77	96
23.....	48		30	97	127
24.....	49		31	93	124
25.....	35		29	121	150
26.....	51		33	129	162
27.....	55		27	135	162
28.....	40		31	140	171
† 29.....			47	131	178
30.....	63		47	120	167
October 1.....	43		30	162	192
2.....	30		22	188	210
3.....	37		36	152	188
4.....	22	† 25	29	142	171
5.....	41	90	25	143	168
† 6.....	23	104	23	132	155
7.....	8	77	23	122	145
8.....	31	179	19	100	119
9.....	16	295	24	90	114
10.....	14	265	23	89	112
11.....	19	280	20	92	112
12.....	11	320	17	87	104
† 13.....			18	77	95
14.....	6	312	22	56	78
15.....	27	387	17	40	57
16.....	8	249	10	41	51
17.....	33	99	7	47	54
18.....	13	67	13	36	49
19.....	18	74	8	26	34
† 20.....			13	23	36
21.....	14	85	5	31	36
22.....	12	105	5	13	18
23.....	10	21	6	22	28
24.....	3	32	6	21	27
25.....	2	35	3	12	15
26.....	2	26	6	9	15
† 27.....			4	16	20
28.....	6	61	9	17	26
29.....	1	15	9	8	17
30.....	23	43	1	17	18
31.....	12	25	4	3	7
November 1.....	3	42	5	7	12
2.....	6	14	1	8	9
† 3.....			3	6	9
4.....	1	20	3	7	10
5.....	1	15	4	9	13
6.....	3	2	1	10	11
7.....		15	4	6	10
8.....	5	12	3	6	9
9.....	5	8	6	3	9
Totals.....	997	3,399	942	3,430	4,372

* Although the "Bulletin" is the September issue, on account of the lateness of going to press it was deemed advisable to make it as inclusive as time would allow.

† Sundays, in which cases included in Monday's totals.

‡ Influenza reportable since October 4, 1918.

The pressure of work during the epidemic and since that time has not permitted the working out of all of the details of the outbreak. One of the features that attracted attention, however, has been the comparatively small number of deaths that have occurred among persons over fifty years of age, but the exact difference between the incidence of the disease on this age-group as compared with other age-groups has not yet been worked out. In the earlier days of the epidemic it seemed, too, as though the disease was not as serious in children as in youth and manhood, but afterwards deaths among children became numerous. To those thrown casually into contact with the disease in the course of their official duties, overcrowding seemed to exert a marked influence, both increasing the number of persons in the household who became ill and increasing the severity of the disease among those infected. Among pregnant women influenza seemed particularly malignant, but whether more so than other septic diseases cannot be stated. These and many other circumstances of the epidemic will be made the subjects of a later report.

THE CAUSE OF INFLUENZA.

When the present epidemic of influenza appeared in Europe it was found that the influenza bacillus could not be invariably isolated in cases that were studied. This fact has led to expressions of doubt that the Pfeiffer bacillus, commonly looked upon as the germ causing influenza, is the actual cause of the disease. While doubt with respect to this matter cannot as yet be regarded as absolutely removed, it still seems most probable that this bacillus is at least the original infective agent. Those who have been studying the influenza for many years tell us that in many cases in which the influenza bacillus is found at the onset in practically pure culture in nasal discharges, it is very quickly replaced by other organisms. From reports at present available regarding the bacteriological study of the disease as it has just presented itself in this vicinity, it appears that cultures from the nose and throat have generally been unsatisfactory in demonstrating a local infection of the influenza bacillus, but that in cases in which death has occurred within four days after the onset of the disease the influenza bacillus may be expected to be found in practically pure culture in the lungs in connection with the broncho-pneumonia present, and that in cases of longer duration the influenza bacillus may be found in mixed culture or possibly not at all.

Dr. J. J. Keegan at the Chelsea Naval Hospital reports in the "Journal of the American Medical Association," of September 28, that the only cases in which he had not obtained cultures of the influenza bacillus from the lungs were those in which he obtained pure cultures of a hemolytic streptococcus. In such instances it would seem that he may have been dealing with the same organisms identified with the type of pneumonia that prevailed in our army cantonments last winter, which chiefly occurred as a complication of measles.

Whatever ground of doubt there may be as to the infective agent of influenza, we must agree that the disease is conveyed from person to person, and the direct implantation of the infective organism in the respiratory tract by droplet infection resulting from the spraying of the organism through air in the immediate vicinity of an affected person by his coughing, sneezing or loud talking, seems to be undoubtedly the usual manner of transmission. Indirect infection through soiled fingers or imperfectly cleansed eating or drinking utensils must also be regarded as a factor in the spread of the disease; but if the influenza bacillus, which we know to be a very short-lived organism outside the human body, really is the infective agent, we are certainly justified in assuming articles even though infected will not long remain dangerous.

INCIDENCE AND MORTALITY FROM INFLUENZA.

The number of persons who contract influenza in any definite groups of people depends a great deal upon their opportunities for infection. It seems certain, however, that some persons possess, temporarily at least, a high degree of resistance, if not an absolute immunity. The comparatively small number of serious cases among persons over fifty years old, for instance, was very noticeable in the local epidemic. The extent to which absolute immunity exists is, however, difficult to determine, because an influenza infection may fail to give symptoms sufficiently pronounced to be recognized as influenza.

Reports from Europe during the present epidemic there say that in some towns 40 per cent of the population had the disease in a recognized form. In Framingham, in this state, it is said that 25 per cent of the population were attacked. The proportion of cases in which pneumonia occurs seems to depend to a considerable extent on the way in which the patients are handled, and exposure and physical exhaustion favor the

development of the complication. The crowding of the sick certainly favors cross infection and doubtless contributes to the frequency of the development of pneumonia through the distribution of more malignant types of the influenza germ, as patients suffering from the more serious types of infection constitute the larger part of those who are confined to bed and particularly of those who are taken to hospitals. But even in the absence of carelessness in handling, and in the absence of crowding, there are some cases of influenza that from the start seem doomed.

In our naval and military camps, available information indicates that in the beginning of the epidemic from 5 per cent to 10 per cent of the influenza cases admitted to the hospitals developed a pneumonia in which the mortality was not far from 60 per cent. Up to October 25 there has been reported in the military camps in this country a total of 296,275 cases of influenza, with 48,328 cases of pneumonia, since the beginning of the epidemic. The deaths from influenza and pneumonia during this period numbered 16,174.

As we cannot be sure that all of these cases of pneumonia were due to influenza, and as we know that all cases of influenza in which pneumonia developed could have been separately reported as pneumonia, we are unable to draw any conclusions from these figures as to the extent to which pneumonia developed in influenza cases. But from what we know of the number of men in our military camps in this country, it would seem that up to the present time more than 25 per cent of the men had contracted influenza in a recognizable form, and that nearly 5 per cent of the patients who had contracted that disease died.

The deaths in Boston attributable to influenza and pneumonia number at the time of the writing of this statement (November 9, 1918), 4,354.

The assumption of a fatality rate as low as 2 per cent means that about 217,700 cases of the disease occurred in the city or that one out of every 3.2 persons was infected. A death rate of 5 per cent as in the army gives us 87,080 cases in Boston or one case for approximately every nine persons. Probabilities, however, seem to favor the higher incidence and lower mortality, and in fact there is reason to believe that if unrecognized influenza infections could be enumerated, the percentage of fatalities in Boston based on the actual number of cases would fall even below 2 per cent, and that the number of cases that actually occurred was correspondingly greater.

ADVICE AS TO CARE OF PATIENTS, AND AS TO PREVENTION OF INFLUENZA AND PNEUMONIA.

What to do Until the Doctor Comes.

Influenza may begin as a common cold. At the least suspicion of having the disease go to bed and remain there. Take a laxative. Drink much plain water. Take plenty of simple, light food, milk, eggs, toast and similar things. Have plenty of fresh air. Send for a doctor. Stay in bed at least forty-eight hours after you think you are well. Gargles and sprays are liable to irritate and injure the linings of the mouth and nose, which nature has arranged to arrest and destroy germs, and so invite infection.

If you take these steps — the chief of which is to remain in bed — you will probably not be seriously sick. Go to bed now — not wait until tomorrow.

Even if you discover later you have only a common cold and not influenza, there is no better treatment than to be in bed.

Advice to Attendants.

Influenza is communicable. The contagion is due to the influenza germ. The germ is contained in the secretions from the lungs, mouth and nose. It is spread chiefly by droplets that are expelled by coughing, sneezing, laughing and talking. These are thrown out at the level of the mouth for a distance of several feet and then float for awhile in the air. They are breathed in by a well person who may be near and he is infected in this way. Anyone having the disease, or who possibly may have it, should always hold before his mouth when coughing, etc., a cloth or a piece of paper or something to prevent these droplets escaping into the surrounding air. These cloths, etc., should be burnt or boiled to kill the germs without delay. Burning or boiling will kill the germs.

Anyone attending a person sick with influenza or coming directly into his presence should wear a gauze "mask" over his mouth and nose. The mask must be changed for a new one when wet or every few hours anyway. The used masks should be boiled or burnt. These masks are made of several thicknesses of gauze, or cotton cloth if no gauze is to be had, fastened over the head so as to cover the mouth and nose. The hands should be carefully washed with soap and water immediately after attending anyone sick and always before eating, and wiped on a clean towel or not wiped at all. Keep your hands out of your mouth. Anything used by any person,

whether sick or well, for eating or drinking must be cleansed and scalded before used again.

The influenza germs when expelled from the mouth are killed by daylight and still more rapidly by direct sunlight. All bed linen, towels, etc., used by patients should be boiled. Blankets and bedding should be thoroughly exposed out of doors to daylight and sunshine.

How to Avoid Infection Generally.

To avoid contagion keep out of places where people are. Do not let anyone cough, etc., into your face. Keep your mouth shut. Wash your hands frequently. Avoid getting tired — go to bed early. Eat your meals regularly and slowly. If compelled to eat away from home, see that the dishes and cups are clean. Keep where the air is fresh. Keep away from any place where the disease is. If you must go into the presence of those sick, cover your mouth and nose with the mask or some similar protection — a handkerchief is better than nothing. Wrap up a used mask, etc., in any paper and boil it before using again or burn it.

If one takes these precautions the chance of being infected is not great.

WM. C. WOODWARD, M. D.,
Health Commissioner.

REGULATIONS AND ORDERS FOR THE PREVENTION OF THE SPREAD OF INFLUENZA.

Regulation of Theaters, Moving Picture Houses, Dance Halls and Other Unnecessary Assemblages.

Whereas, An epidemic of influenza is now prevalent in the community; and

Whereas, Assemblages or gatherings of people constitute a medium for the spread of this epidemic and may be injurious to the public health;

Therefore, it is

Ordered, By the Health Department of the City of Boston, that from 12.01 o'clock a. m., Friday, September 27, 1918, to 7 o'clock a. m., Monday, October 7, 1918, no assemblages or gatherings shall be permitted or held in theaters, moving picture houses or dance halls within the City of Boston, and no other unnecessary assemblages or gatherings of people shall be permitted or held within said city.

This regulation shall be effective during the period hereinbefore named unless altered, modified or extended by the Health Department of the City of Boston.

Dated September 26, 1918.

WM. C. WOODWARD, M. D.,
Health Commissioner.

The operation of the regulation in regard to assemblages and gatherings, issued September 26, 1918, is hereby extended from 7 o'clock a. m. Monday, October 7, 1918, to 11.59 p. m., Saturday, October 12, 1918.

Dated October 3, 1918.

WM. C. WOODWARD, M. D.,
Health Commissioner.

The operation of the regulation in regard to assemblages and gatherings, issued September 26, 1918, is hereby extended from 11.59 p. m., Saturday, October 12, 1918, to 11.59 p. m., Saturday, October 19, 1918.

Dated October 10, 1918.

WM. C. WOODWARD, M. D.,
Health Commissioner.

Request to Clergy to Limit Duration and Number of Services.

To the Clergy of the City of Boston:

Your attention is invited to the inclosed order, issued by the Health Commissioner, with the approval of his Honor the Mayor, as an emergency measure to limit the spread of "grippe" and pneumonia.

The Health Commissioner cannot undertake to determine for the clergy what does or does not constitute a "public gathering" necessary for the due exercise of religious devotion.

He begs, however, that the clergy, bearing in mind the gravity of the situation that has led to the issuance of the order set forth, will interpret the order liberally, and will restrict religious gatherings, with respect to frequency, numbers and duration, in so far as may be compatible with a proper exercise of the offices of the church.

In making this request the Health Commissioner feels assured of the hearty coöperation of the clergy of Boston.

Dated October 4, 1918.

WM. C. WOODWARD, M. D.,
Health Commissioner.

Wakes Prohibited During the Epidemic.

To the Undertakers of Boston:

Your attention is called to the inclosed copy of a regulation of the Health Commissioner and approved by the Mayor of Boston. This regulation was promulgated with a view of helping to check the spread of influenza.

You are familiar with present rules concerning the preparation for burial of cases that die of influenza and pneumonia. It is now recommended that, during the present epidemic, you discourage wakes, and to this end no chairs should be provided by undertakers for the purpose of promoting attendance at homes where persons are dead. Undertakers should notify relatives of persons who die that wakes will not be allowed. This order does not, of course, prevent relatives and friends calling at the residence of the deceased to extend their sympathy, but it is expected that they will not remain for a longer period than is necessary.

The funeral to the church and cemetery must be limited to only relatives and near friends.

Undertakers in Boston licensed by the Health Commissioner are expected to coöperate with the Health Department during this emergency in

assisting in any way possible toward preventing the spread of the disease and also by endeavoring to allay the fears of people with whom they come in contact.

You may use this letter in explanation of whatever action you may take in compliance with any oral instructions or orders which you may receive from the Health Department concerning wakes and funerals.

Dated September 27, 1918.

WM. C. WOODWARD, M. D., *Health Commissioner.*

Regulation for the Cleansing of Glasses, Cups, Spoons and Other Utensils.*

The Health Commissioner having examined into the relation to the public health of unclean and non-sterile glasses, cups, spoons, forks, and other utensils used in the sale or dispensing of liquids, beverages, drinks, food, or other refreshments, and having found that they may be injurious to the public health, makes and adopts the following regulation for the public health and safety relative thereto:

No glass, cup, spoon, fork, or other utensil used for the public sale or dispensing of liquids, beverages, drinks, food, or other refreshment, for consumption in or about the place of sale or dispensing, shall be again used unless the same be thoroughly cleansed and scalded with clean, boiling water or otherwise sterilized.

Dated September 28, 1918.

WM. C. WOODWARD, M. D., *Health Commissioner.*

Bowling Alleys, Pool Rooms, Barrooms, Etc., to be Closed.

Whereas, An epidemic of influenza is now prevalent in the community; and

Whereas, Assemblages or gatherings of people constitute a medium for the spread of this epidemic and may be injurious to the public health; and

Whereas, The Health Department has heretofore, viz., on September 26, 1918, and on October 2, 1918, issued certain regulations relative to assemblages or gatherings; and

Whereas, It is deemed necessary to make further regulations for the protection of the public health;

Therefore, it is

Ordered, By the Health Department of the City of Boston, that from 12.01 o'clock a. m., Sunday, October 6, 1918, until further order, bowling alleys, pool rooms, billiard halls, slot machine parlors, soda fountains and auction rooms within the City of Boston shall not be opened and persons shall not be permitted to use the same; and all persons, firms and corporations holding first or second class victualler's licenses and first-class innholder's licenses shall not serve any liquids, whether intoxicating or otherwise, except on such parts of their premises as have been heretofore and are actually used as *bona fide* restaurants, and then only to persons actually using the same for restaurant purposes.

Dated October 4, 1918.

WM. C. WOODWARD, M. D., *Health Commissioner.*

* The foregoing regulation adopted by the Health Commissioner is permanent and will continue in force beyond the period of the epidemic of influenza.

Appeal Sent Out by Mayor Peters to Various Churches.

Our city at present is suffering from the most terrible epidemic in present memory, an epidemic that seriously threatens the health of the community and defies medical treatment. It is causing untold suffering and imperils our efficiency in our great national struggle. To prevent the further spread of this disease every possible step should be taken and every sacrifice should be made.

The Mayor's Emergency Committee and the Health Commissioner of the City of Boston have both, as a measure of medical emergency, urged me to appeal to the church authorities to suspend all gatherings of public worship. Not unmindful of the need and solace of religion at this time, it yet seems imperative to comply with every health requirement that the best medical advice tells us will tend to lessen the spreading of this disease. I therefore call upon you most urgently to suspend at once all gatherings of public worship until the present crisis has passed and indications are given that the people with safety to themselves and the community can mingle again together.

Dated October 4, 1918.

Hours of Retail Stores Regulated.

Whereas, An epidemic of influenza is now prevalent in the community; and

Whereas, Congestion of people in public places, public conveyances or stores constitutes a medium for the spread of this epidemic and may be injurious to the public health;

Therefore, it is

Ordered, By the Health Department of the City of Boston, that beginning Tuesday, October 8, 1918, until further notice, retail, department, dry goods, specialty, clothing and furniture stores and shops within the City of Boston shall not open until 10 a. m. and shall not close before 6.15 p. m.

Dated October 7, 1918.

WM. C. WOODWARD, M. D.,
Health Commissioner.

Regulation Governing the Hours of Business in Retail Stores.

Whereas, An epidemic of influenza is now prevalent in the community; and

Whereas, Congestion of people in public places, public conveyances or stores constitutes a medium for the spread of this epidemic and may be injurious to the public health;

Therefore, it is

Ordered, By the Health Commissioner of the City of Boston, that beginning Tuesday, October 8, 1918, until further notice, retail, department, dry goods, specialty, clothing and furniture stores within the City of Boston shall not open until 10 a. m. and shall not close before 6.15 p. m.

Dated October 7, 1918.

WM. C. WOODWARD, M. D.,
Health Commissioner.

Rescinding of Regulation Governing the Hours of Business in Retail Stores.

It was ordered that the regulation of the Health Department of October 7, 1918, regulating the hours of business of retail, department, dry goods, specialty, clothing and furniture stores and shops within the City of Boston be and is hereby rescinded.

Dated October 7, 1918.

WM. C. WOODWARD, M. D.,
Health Commissioner.

Revocation of Regulation for the Prevention of the Spread of Influenza.

Whereas, The prevalence of influenza in the City of Boston has diminished to an extent justifying such action;

Therefore, it is

Ordered, By the Health Department of the City of Boston, that the order issued by it on October 4, 1918, whereby bowling alleys, pool rooms, billiard halls, slot machine parlors, soda fountains and auction rooms, within the City of Boston, could not be lawfully opened, and whereby persons could not lawfully use the same, and restricting the operation of persons, firms and corporations holding first or second class victualler's licenses and first-class innholder's licenses, be and the same is hereby revoked from and after 11.59 o'clock p. m., Saturday, October 19, 1918.

Dated October 18, 1918.

WM. C. WOODWARD, M. D.,
Health Commissioner.

Request to Theater Managers to Issue Proper Warnings on Screens, Slides and in Programs.

To Theater Managers in Boston:

Sneezing and coughing are factors of extreme importance in spreading influenza. Sneezing and coughing in confined places is particularly dangerous. The public now has a very definite knowledge with respect to these matters, even though individual persons here and there do not live up to that knowledge. Nearly everyone, even though he himself offends with respect to such matters, fears the cougher, the sneezer and the spitter.

May I ask, therefore, that with a view to preventing the spread of influenza by coughing, spitting or sneezing among the spectators who will assemble from day to day in your theater, you cause proper warnings to be printed in such programs as you may issue and to be displayed on such screens as you may use for stereopticon or moving picture displays, asking everyone in the audience to refrain, so far as may be possible, from coughing, spitting and sneezing; and in so far as coughing, spitting or sneezing may be unavoidable, to protect the other spectators present from infection by the proper use of the handkerchief. Ushers might well be directed to caution those who are careless with respect to these matters and to request persistent offenders to leave the theater.

By taking the action outlined above, you will be not only protecting the public from infection but also reassuring the public as to the safety

with which it can patronize your theater. If the Health Department can assist you in this matter, it stands ready to do so.

Dated October 6, 1918.

WM. C. WOODWARD, M. D.,
Health Commissioner.

LYING-IN HOSPITALS: INSPECTIONS PRIOR TO ESTABLISHMENT. FIRE HAZARDS AS RELATED TO "SUITABILITY" OF PREMISES.

Persons about to establish new lying-in hospitals or to move into new quarters lying-in hospitals already established, and owners and agents negotiating for the sale or rental of premises for use as lying-in hospitals, are urged to confer with the Health Commissioner before the project is executed. This should be done in order to make sure that the Health Commissioner will be able to certify to the suitability of the premises in the condition in which they then are, and, if he cannot do so, then to ascertain what repairs, alterations and improvements are necessary in order to permit such certification. Certification by the Health Commissioner is by statute a condition precedent to the issue of a license by the State Board of Charity, and such a license is necessary before a lying-in hospital can be lawfully established or maintained.

In determining whether any premises are or are not suitable for use as a lying-in hospital, the Health Commissioner is required to consider their suitability from the standpoint of fire hazards. Concerning this matter the State Board of Charity, in response to an inquiry from the Health Commissioner, has submitted the opinion set forth below,* so attention of all interested persons is earnestly requested.

STATE BOARD OF CHARITY,
BOSTON, MASS., October 18, 1918.

WILLIAM C. WOODWARD, M. D., *Commissioner, Boston, Mass.:*

MY DEAR DOCTOR WOODWARD,—In your communication of the 17th instant addressed to the State Board of Charity you recite the practice of your department heretofore in the execution of chapter 569 of the Acts of 1910, as amended by chapter 264 of the Acts of 1911, relating to the licensing of lying-in hospitals. In the course of your statement you say that the word "suitability" as used in the law has been construed to mean "Suitability from a sanitary standpoint," and you state further that no consideration has heretofore been given to suitability from the standpoint of fire hazard. You ask this department to inform you regarding your jurisdiction and duties in that regard.

In reply, I wish to say that the matter has been given careful consideration by the State Board. As they understand the letter and the intent

of the licensing statute, the word "suitability" implies reasonable suitability or appropriateness in all particulars vital to the conduct of a lying-in hospital and to the protection and treatment of its inmates. They call your attention to the fact that although the second section of the law renders all lying-in hospitals thus licensed subject to visitation and inspection at any time by the police authorities, there is nevertheless no machinery provided for the method of ascertaining suitability other than that found in the first section, requiring a certification by the local Board of Health that "from its inspection and examination of such hospital, hospital ward or other place aforesaid, the same is suitable for the said purpose."

Nevertheless, it is plainly incumbent upon the State Board of Charity, in the exercise of its authority, to issue a lying-in hospital license for certain premises and thereafter to inspect the same; to see to it that conditions for the reception, care and treatment of patients are such as may be not only for the health of such patients but also for their protection from injury due to improper fire protection or other avoidable cause.

In the absence of ruling by the Attorney-General or determination of the question by our courts, and subject always to the superior authority of such ruling or decision, it is the opinion of the State Board of Charity that your certification of suitability within the terms of this statute contemplates your approval not only from a sanitary standpoint but also from the point of view of fire hazard and all other aspects vital to the welfare of prospective patients.

Very truly yours,

ROBERT W. KELSO,

Executive Secretary.

REPORT OF THE HEALTH UNIT FOR THE MONTH OF SEPTEMBER, 1918.

Health Department.

Visits made by medical inspector:

Contagious	60
Tuberculosis	0
Ophthalmia	5
Miscellaneous	27
Total	<u>92</u>

Cases visited by nurses:

Medical	96
Babies	313
Total	<u>409</u>

Defective sanitary conditions found in tenement houses,	6
Calls by district physician from Boston Dispensary .	325

Instructive District Nursing Association.

Visits made by nurses	948
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Baby Hygiene Association.

Total number of babies cared for	195
New babies admitted	14
Babies readmitted	4
Conferences held	4
Total conference attendance	259
Home visits by nurses	373

Associated and Hebrew Federated Charities.

Cases investigated and assisted	0
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Consumptives' Hospital Department.

Calls by nurses in district	634
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SUMMARY OF VITAL STATISTICS.

There were 2,691 deaths reported in the month of September, against 977 in the corresponding period last year, a death rate of 41.74 against 15.39.

Reported deaths of nonresidents numbered 312, against 140 last year.

The principal decreases and the principal increases were:
Increases:

Influenza	1,342
Whooping cough	21
Pneumonia, Broncho	120
Pneumonia, Lobar	268

Decreases:

Diarrhea and enteritis (under 2 years)	19
Diarrhea and enteritis (2 years and over)	8
Accidental and violent	22

There were 11 more deaths under 1 year, 93 more under 2 years and 163 more under 5 years.

NUMBER OF CASES AND DEATHS FROM COMMUNICABLE DISEASES FOR SEPTEMBER.

	CASES.			DEATHS.		
	1918.		1917.	1918.		1917.
	Total.	Non-resident.	Total.	Total.	Non-resident.	Total.
Diphtheria.....	138	16	265	12	1	14
Scarlet fever.....	29	2	50	.....	.....	1
Measles.....	22	.....	75	1	.....	3
Typhoid fever.....	22	3	36	4	2	5
Whooping cough.....	118	3	104	31	4	10
Pulmonary tuberculosis.....	200	30	228	101	13	84

MORTALITY FOR SEPTEMBER AND CORRESPONDING MONTH IN 1917.

	1918.	1917.
Total deaths	2,691	977
Nonresidents	312	140
Rate	41.74	15.39
Corrected rate (nonresidents deducted)	36.90	11.87
Deaths under 1 year	243	232
Deaths under 2 years	352	259
Deaths under 5 years	453	290
Deaths over 60 years	294	266

CAUSES OF DEATH.

	Totals, 1918.	Non- residents, 1918.	Totals, 1917.
Cerebro-spinal meningitis	4	1	—
Diphtheria	12	1	14
Measles	1	—	3
Scarlet fever	—	—	1
Tuberculosis (pulmonary)	101	13	84
Tuberculosis (other forms)	14	2	16
Typhoid	4	2	5
Whooping cough	31	4	10
Accidental and violent	65	16	87
Heart disease, endocarditis, pericarditis and nephritis, .	157	16	164
Bronchitis	19	—	2
Cancer	76	9	72
Diarrhea and enteritis (under 2 years)	81	23	100
Diarrhea and enteritis (2 years and over)	7	2	15
Erysipelas	1	—	1
Meningitis and encephalitis	2	—	3
Old age	2	—	—
Pneumonia, Broncho	151	—	31
Pneumonia, Lobar	308	32	40
Premature birth	35	6	31
Puerperal diseases	11	4	11
Rheumatism	—	—	2
Syphilis	5	3	9
Influenza	1,342	133	—
Other causes	262	45	276

The Following is a Summary of the Work Done by
the Different Divisions in the Department for
September, 1918.

CENTRAL DIVISION.

Regulations	4
Stable hearings	5
Stable licenses approved	2
Premises ordered vacated	5
Miscellaneous orders	5
Applications for lying-in hospitals approved	3
Transfer	1

Appointments	4
Order rescinded	1
Dump applications approved	2
Undertaker appointed	1
Permit to reoccupy premises	1
Temporary appointment	1
Prosecutions	30
Leaves of absence granted	2
Premises assigned	1

Licenses — Permits.

Milk licenses	72
Vehicles inspected and approved	392
Manicure — Massage	4
Numbers assigned	47
Licenses to peddle fruit and vegetables	33
Hen permits	84
Licenses renewed to remove grease, bones, etc.	81
Dump permit	1
Court cases	4
Fines	\$20

MEDICAL DIVISION.

Communicable Diseases.

Number of visits by medical inspectors	423
Antitoxin given	12
Deaths investigated	32
Cases brought to Boston for treatment	82
Vaccinations	286
Vaccination certificates	240
Antityphoid vaccine administered	9

Public Health Nursing.

Communicable disease visits	728
Number of revisits (infants)	4,111
Number of new babies visited	734
Total visits by nurses	<u>5,573</u>

BACTERIOLOGICAL LABORATORY.

Examinations for Diagnosis and Release.

Diphtheria	632
Tuberculosis	256
Typhoid	137
Gonorrhea	424
Gonorrheal ophthalmia	43
Syphilis	497
T. B. Comp. Fix. Test (special examinations)	497
Other examinations *	54
Bacteriological milk examinations	480

* Malaria, 9; gelatine foreoli, urines for gonococci, 2; paratyphoid, 2; sputa for influenza, 3; lung for glanders, 1; chicken livers for T. B., 2; sample nuts for animal life, 15; rats, 16; genito-urinary T. B., 2.

FOOD INSPECTION.

Live Stock Inspected at Brighton Abattoir.

Cattle inspected	926
Calves inspected	498
Swine inspected	3,221
Sheep inspected	16
Parts condemned	461
Swine condemned	4
Stores inspected	944
Court cases	33
Fines	\$560

DAIRY INSPECTION.

Total number of sanitary inspections	673
Total number of cattle inspections	4,638
Sanitary inspection of dairies	384
Sanitary inspection of milk depots and creameries	289
Dairy scoring above 50 points *	334
Dairy scoring below 50 points	29
Dairies with milk rooms	321
Dairies without milk rooms	42

MILK INSPECTION.

(Examinations as to Statute Requirements.)

Samples examined:	
Chemical examinations of milk	1,038
Bacteriological examinations of milk	480
Chemical examinations of vinegar	101
Miscellaneous examinations	3
Number of court cases	51
Fines	\$875

Inspection of Provisions — Articles Condemned.

Meat:		Fish:	
Poultry	1,241 pounds	Fish	115 pounds
Veal	40 pounds	Shredded fish	16 pounds
Mixed meats	178 pounds	Miscellaneous:	
Spare ribs	50 pounds	Butter	15 pounds
Beef	18 pounds	Grapes	4,895 pounds
Lamb	20 pounds	Pears	15 boxes
Meat scraps	6 pounds	Peaches	1 bushel
Frankforts	4 pounds	Corn flakes	5,160 pounds
Bologna	2 pounds	Candy	310 pounds
Pork	180 pounds		
Corned beef	53 pounds		

SANITARY INSPECTION.

New reports	6,340
Legal notices recommended	746
Reinspections	4,986

* Passable mark.

Nuisances reported	4,621
Complaints investigated	812

MORBIDITY AND MORTALITY.

(9 Months.)

	1918.	1917.
Total deaths	11,319	9,745
Nonresident deaths	1,643	1,432
Deaths under 1 year of age	1,631	1,533
Pneumonia	1,631	1,250
Cancer	730	694
Heart disease and nephritis	1,679	1,790
Diarrhea and enteritis under 2 years	310	317

DEATHS FROM COMMUNICABLE DISEASES.

(9 Months.)

	1918.	1917.	1918. Non- residents.
Diphtheria	167	200	54
Scarlet fever	21	36	8
Measles	107	77	12
Typhoid fever	16	19	5
Whooping cough	145	32	11
Tuberculosis	915	875	73

CASES OF COMMUNICABLE DISEASES REPORTED.

(9 Months.)

	1918.	1917.	1918. Non- residents.
Diphtheria	2,370	2,718	485
Scarlet fever	918	1,098	182
Measles	6,250	4,918	81
Typhoid fever	91	151	15
Whooping cough	1,859	525	24
Tuberculosis	2,218	2,091	204

MONTHLY METEOROLOGICAL SUMMARY, SEPTEMBER.

ATMOSPHERIC PRESSURE.

(Reduced to sea level; inches and hundredths.)

Mean, 30.04; highest, 30.43; date, 6; lowest, 29.69; date, 6.

TEMPERATURE.

Highest, 81; date, 5; lowest, 45; date, 11; greatest daily range, 26; date, 28; least daily range, 5; date, 13; normal for month, 62.70.

PRECIPITATION.

Total this month, 9.19; snowfall, 0.0; greatest precipitation in 24 hours, 2.42; date, 12, 13; snow on ground at end of month, 0; normal for this month, 3.19.

WIND.

Prevailing direction, west; total movement, 6,679 miles; average hourly velocity, 9.3; maximum velocity (for five minutes), 28 miles per hour from northwest, on 27th.

WEATHER.

Number of days clear, 8; partly cloudy, 10; cloudy, 12; on which .01 inch or more of precipitation occurred, 12.

MISCELLANEOUS PHENOMENA (Dates of).

Auroras, 0; halos: solar, 1, 3, 9, 11, 12, 15, 17; lunar, 14; hail, 0; sleet, 0; fog, 1; thunderstorms, 1, 17, 18, 20, 26; frost: light, —; heavy, —; killing —.

OCTOBER, NOVEMBER, DECEMBER, 1918

MONTHLY BULLETIN

HEALTH DEPARTMENT

OF THE

CITY OF BOSTON



WM. C. WOODWARD, M. D., *Commissioner.*

STATISTICS FOR 1917.

Population		772,370		
Births	19,856	Birth rate	25.7	
Deaths	12,721	Death rate	16.47	

The deaths and death rate stated above cover all deaths occurring in Boston, of nonresidents as well as of residents.

BOSTON
HEALTH DEPARTMENT
CITY HALL ANNEX
1919

HEALTH DEPARTMENT.

(Tel. Fort Hill 5100.)

Commissioner of Health.

Secretary	1109 City Hall Annex.
Publications	1109 City Hall Annex.
Licenses	1109 City Hall Annex.

Medical Division	1107 City Hall Annex.
Communicable Diseases	1107 City Hall Annex.
Child Hygiene	1108 City Hall Annex.
Health Unit	17 Blossom street.
Vaccination Station	17 Blossom street.
Detention Hospital	Southampton street.
Occupational Clinic	17 Blossom street.

Bacteriological Laboratory	1101 City Hall Annex.
Examination of Cultures	1101 City Hall Annex.
Wassermann Tests	1101 City Hall Annex.

Food Inspection Division	1110 City Hall Annex.
Inspection of Foodstuffs	1110 City Hall Annex.
Examination of Milk and Vinegar	1104 City Hall Annex.
Inspection of Dairies	1102 City Hall Annex.
Brighton Abattoir	Market street, Brighton.

Sanitary Inspection Division	1111 City Hall Annex.
Abatement of Nuisances	1111 City Hall Annex.
Examination of Gas Fitters	1111 City Hall Annex.

Vital Statistics Records and Accounts	1112 City Hall Annex.
Permits for Burial	1112 City Hall Annex.

Superintendent of Peddlers	27 North Grove street.
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OFFICE HOURS.

The Health Department will be open from 9 a. m. to 10 p. m., except Saturdays, when the hours will be from 9 a. m. to 1 p. m. and from 5 p. m. to 10 p. m. Sundays and holidays, from 10 a. m. to 12 m. and from 5 p. m. to 10 p. m., for the reporting of cases of communicable diseases, issuing of burial permits, the distribution of antitoxins and vaccines, and the receiving of cultures and widals.

FREE WASSERMANN TESTS.

The Bacteriological Laboratory is prepared to examine free of expense blood specimens by the Wassermann test for syphilis. Tests are made each Tuesday, Wednesday, Thursday and Friday. Blood is drawn from patients in the laboratory each Monday, Tuesday, Wednesday and Thursday from 2 to 4 p. m.

MONTHLY BULLETIN

OF THE

HEALTH DEPARTMENT OF THE CITY OF BOSTON.

WILLIAM C. WOODWARD, M. D., *Health Commissioner.*

All communications relating to this publication should be addressed to the HEALTH COMMISSIONER, BOSTON, MASS.

VOL. 7.

NOS. 10-12

OCTOBER, NOVEMBER, DECEMBER, 1918.

INFLUENZA.

The influenza epidemic, the beginning of which was described in the September Bulletin, apparently reached its climax so far as the daily incidence of new cases was concerned about the first of October. The week ending October 5 there was a total of 1,214 deaths attributed to either influenza or pneumonia. By the third week in October this total had fallen to less than 600, and for the week ending November 9 the total was down to forty-seven. About November 15 it began to be apparent that a sudden and decided increase in the number of cases of influenza was occurring, but by the 25th the disease was apparently no more prevalent than early in the month. About the first of December, however, another abrupt increase in the prevalence of influenza appeared, and from then the disease went on increasing until the climax of what was a severe recrudescence of the disease was reached on or about December 31.

Whether or not it may be more than a succession of coincidences it is certainly of interest to note that the November outbreak of influenza showed itself three days after the Peace Day celebration on November 12, when the streets, eating places and public conveyances were jammed with crowds; that the December epidemic began to manifest itself after the Thanksgiving holiday, with its family reunions and visiting; and that reported cases mounted rapidly during the period of Christmas shopping, reaching a maximum a week after the holiday.

During this recrudescence of influenza in December there was virtually no difficulty in supplying prompt and appropriate medical care and nursing in individual cases.

Every reported case was visited by a Health Department physician or nurse, who supervised arrangements for the protection of other members of the household and distributed masks and gave instructions in their use. Public education with reference to the disease was carried on through the newspapers, the distribution of circulars, street-car placards and by the systematic presentation of instructions and advice in the moving picture theaters. All the physicians in the city were circularized with a view to placing before them a summary of the latest information to be derived from special studies of the disease.

Influenza was not made a reportable disease by the State Department of Health until October 4, when the peak of the first epidemic was passed in Boston, and this fact, coupled with demands upon the time of local physicians to respond to professional calls during the continuance of the epidemic, has probably resulted in a wider statistical discrepancy between reported cases of influenza and deaths in Boston than in some other cities which were able to profit by Boston's experience. On the recurrence of the disease in Boston in December, however, a special effort was made to secure the prompt and complete reporting of all cases coming to the attention of physicians, and it is believed the response on the part of local physicians resulted in as prompt and complete reports of the cases of influenza in Boston in December as is likely to be secured in a large city under similar conditions. In every death certificate filed wherein influenza appeared, whether as a direct or contributory cause of death, it was found that the case had previously been reported as a case of influenza, but that physicians' reports of influenza cases fell far short of recording all the cases of influenza which occurred in the city is evident from the fact that while there was a total of 5,725 cases of influenza reported by physicians during December, the death certificates filed during the month show 403 deaths from influenza besides 135 from pneumonia, some of which it seems reasonable to suspect might have been complicated with influenza. As even 403 would represent a mortality of about 7 per cent for 5,725 cases, it does not seem probable that one half of the cases occurring in the city could have been reported, but the extent to which physicians actually failed to report cases coming to their attention is of course rendered uncertain because many persons who have influenza do not call physicians.

Physicians tended to report their cases when they found time to do so, and a few might happen on the same day to find

time to report accumulations of fifty or more cases. But making all allowance for daily fluctuations attributable to this cause, it has become apparent that both the rise and subsidence of the two epidemics in Boston has been marked by the same sort of a succession of explosive outbreaks that is usually to be observed in a severe epidemic of any communicable disease. For the reasons just referred to it was seen that weekly returns rather than daily reports furnished the only safe guide for determining whether the epidemic was really increasing or abating.

The reported results of the treatment of influenza cases with serum from convalescent patients seemed so encouraging that the Health Department in December took active steps in conjunction with the Boston City Hospital to bring about a more general use of this method of treatment, and in this connection sent out the letters shown elsewhere in the Bulletin. The department's appeals for volunteers to furnish serum did not meet with the response that was looked for and a considerable proportion of those who did respond had to be rejected. It is at present too soon to form any conclusion as to the results attained by efforts to extend this form of treatment.

Deaths for the Year 1918.

MONTH.	All Causes.	Total Influenza and Pneumonia. All Forms.	Influenza.	Pneumonia. All Forms.
January.....	1,307	239	4	235
February.....	1,276	280	9	271
March.....	1,248	240	15	223
April.....	1,183	216	9	207
May.....	1,001	116	1	115
June.....	871	57	1	56
July.....	920	61	.....	61
August.....	848	23	.....	23
September.....	2,731	1,822	1,357	465
October.....	3,408	2,487	2,026	461
November.....	1,048	228	145	83
December.....	1,604	624	451	173
Totals.....	17,445	6,393	4,018	2,375

Influenza and Pneumonia Deaths During September, October, November and December, 1918, by Age Periods.

1918.	Under 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 years and Over.	Totals.
September.....	250	136	587	530	195	60	36	28	1,822
October.....	499	170	694	651	249	119	67	35	2,484
November.....	47	19	37	66	27	15	7	10	228
December.....	95	37	174	160	65	47	30	15	623
Totals.....	891	362	1,492	1,407	536	241	140	88	5,157

AN APPEAL FOR BLOOD SERUM.

The following appeal was sent on January 4 to every practising physician in Boston requesting his aid in securing blood serum.

"Blood serum for the cure of patients suffering from pneumonia is urgently needed. Response to the call heretofore issued has been disappointingly small, and there is now no one available from whom blood can be obtained even in most urgent cases.

Persons who are willing to make a small sacrifice for the saving of human life and who are in a condition to render their blood for service for that purpose are urged to report at once to the Health Department in person, by mail, or by telephone.

If the offer be made by mail the letter should show the name, address and telephone call of the writer, the name of the physician in attendance when the writer suffered from influenza-pneumonia, and the date when the patient was pronounced well. Blood serum to be of value must come from a person who has suffered from influenza-pneumonia recently, within a month, and who is at present in good health.

This opportunity affords a chance not only for sacrifice in the interests of patients who are unable to remunerate the givers of blood, but affords a chance for those who desire to pay for the blood they give to obtain such a remuneration in case application for such assistance is made by persons able to pay for it.

This present appeal is based not only on the fact that there are now no available donors of blood on the registry of the

Health Department, but also on the sharp increase in the number of deaths from pneumonia recorded on January 3. It is only against pneumonia that the blood from recovered patients is most valuable."

ISOLATION OF PATIENTS SUFFERING FROM INFLUENZA.

Houses in which influenza patients are under treatment are not placarded, and there is no specific law or regulation forbidding persons to enter rooms occupied by patients suffering from influenza, yet prudence and common sense both dictate that there should be no unnecessary visit to the sick room. The physician must enter, and so must the nurse, but visiting the patient should be forbidden to all others. Such isolation should begin on the slightest suspicion of influenza and continue for a period of not less than one week from the onset of the disease.

PREVENTION OF INFLUENZA; CO-OPERATION BY MEDICAL PROFESSION.

The following letter was sent by the Health Commissioner to each practising physician in Boston:

DEAR DOCTOR,—Like many other cities Boston is apparently destined to suffer a secondary influenza epidemic. The amount of sickness and number of deaths resulting therefrom will depend largely upon the extent to which our people themselves can be induced to avoid unnecessary contact with others who may be sources of infection and to take personal precautions when necessarily called on to come in contact with the sick.

Reporting.—In accordance with section 50 of chapter 75 of the Revised Laws of the Commonwealth, the State Department of Health has declared influenza to be a disease dangerous to public health, and since October 4, 1918, has required physicians to notify local boards of health of all cases which may come to the knowledge of physicians, under the penalty provided in the statute for failure to do so. The death certificates filed at this office daily show, however, that many cases of influenza are not being reported by physicians as they are required to do by the laws of this state.

Co-operation to Prevent Influenza.—Besides calling your attention to your legal obligation to report at once every case of influenza which may come to your knowledge, this depart-

ment desires to urge you both as a professional and civic duty to give this department your active co-operation in efforts to save lives in this city by trying in every practicable way to prevent the possible spread of infection of the disease. To this end you are requested to give the following your earnest consideration.

Colds to be Treated as Influenza.— There is no known method, laboratory or otherwise, by which an attack of influenza can be differentiated from an ordinary cold or bronchitis. Supposed ordinary, mild colds are undoubtedly an important factor in the spread of influenza. In instances of uncertainty of diagnosis, therefore, it would seem that the interests of the community at the present time demand that every doubtful case be regarded as a case of influenza — at least in so far as isolation, etc., are concerned, if not for purpose of reporting.

Sleep Alone.— Like most contact diseases, a case of influenza is most contagious in the beginning, and many lives would be saved this winter if everyone could be prevailed upon to sleep alone. Any symptoms suggestive of a cold should be regarded in any event as a sufficient reason for insisting not only on a separate bed but a separate room.

Channels of Infection.— Evidence seems conclusive that the infective micro-organism or virus of influenza is given off from the nose and mouth of infected persons, and must gain access to the nose, mouth or throat of a susceptible person in order to transmit the disease. Droplet infection, the spraying of the infective agent into the air in the immediate vicinity of the infectious person, through his coughing, sneezing or talking, and soiled fingers or directly contaminated food or eating or drinking utensils may for all practical purposes be regarded as the means of transmitting the disease.

Infection Through Soiled Eating Utensils and Soiled Hands.— In giving instructions in a family, the advisability of boiling the eating and drinking utensils of the patients, and of washing the hands of members of the family other than the patient, immediately before eating, should not be overlooked.

Masks.— Masks, properly used, are to be advised for those in immediate attendance upon the sick or necessarily in the sick room.

Selection of Nurses.— Persons over forty years of age seem less susceptible to influenza than those between twenty and forty. This fact should be considered when choice of an attendant for the sick in a household is possible.

Hospital Treatment vs. Home Treatment.— Home

treatment is to be preferred. It may be contraindicated by the absence of medical or nursing care or other necessary facilities in the home, or by the absence of adequate accommodations for the isolation of the patient. With respect to patients suffering from mild attacks, hospitalization may result in cross-infection that would not otherwise occur. The objection to hospitalization in the case of the patient seriously ill lies in the danger to the patient incident to removal.

Isolation of Suspects.— It is highly desirable at this time that persons who are coughing or sneezing be kept out of street cars, offices, factories, shops or elsewhere where people come in close contact. Physicians will perform a public service if they can prevail upon such persons to stay at home.

Placarding.— This department is prepared to placard houses where persons suffering from influenza disregard instructions for the protection of others.

Crowded Cars, Stores, etc.— Crowded public conveyances are a serious menace to public health, and physicians are requested, whenever they can, to induce persons to walk at least part of the distance in going to and from work. Shopping should be done at times when stores are least crowded. Unnecessary visits to crowded places of amusement should be avoided, and patronage given in any case only to places that are clean and well ventilated.

Educational Literature, etc.— There are inclosed circulars relating to influenza and the making of masks, with a view, subject to your approval, to distribution in the families of your patients. If additional copies be desired they will be sent you on application. Circulars will soon be available in Italian and Yiddish.

If the Health Department can co-operate with you in any way — either with respect to the safeguarding of your patients suffering from influenza, and their families, or otherwise — it will be glad to do so.

COUGHING AND SNEEZING UNAVOIDABLE DANGERS.

Coughing, sneezing, and even forcible talking are still looked upon as the most potent agencies through which influenza is spread. Coughing, sneezing, and forcible talking, in crowds, whether indoors or out, *unless safeguarded by the use of the handkerchief or other protective covering, must be looked upon as little more than assaults upon the assembled persons generally.*

Covering the mouth and nose with the handkerchief when coughing and sneezing tends to protect the public, but there is always danger that the cough or the sneeze will have occurred before the handkerchief is in place, or that mild coughs and sneezes will be disregarded. A forcible talker, however, is hardly in a position to protect his mouth during talking by the use of any protective covering.

Holding one's hand before one's mouth or nose during talking, sneezing or coughing, may tend to limit the spread of infection by means of droplets, but it tends also to soil the hands, and thus tends to convey the infection to the next persons whose hands are taken.

The moral is that coughers, sneezers, and forcible talkers, especially if they have colds, are dangerous at best and should be excluded from crowded places rather than left to protect by their own skill and agility in getting handkerchiefs or cloths before their faces before the cough or the sneeze takes place.

The Health Department has prepared a placard requesting coughers and sneezers to remain away from places of assembly and will display them as widely as possible throughout the city. Persons desiring such cards or placards for use about their own establishments will be furnished with them upon request.

THEATERS AND THE MOVIES TO CO-OPERATE IN PREVENTING DROPLET-BORNE INFECTION.

The following letter was sent to the proprietor of every moving picture house and theater in Boston:

DEAR SIR,— May I ask that, with a view to preventing the spread of influenza by coughing, spitting or sneezing among the spectators who will assemble from day to day in your theater, you cause proper warnings to be printed in such programs as you may issue and to be displayed on such screens as you may use for stereopticon or moving picture displays, asking everyone in the audience to refrain, so far as may be possible, from coughing, spitting and sneezing; and in so far as coughing, spitting or sneezing may be unavoidable, to protect the other spectators present from infection by the proper use of the handkerchief. Ushers might well be directed to caution those who are careless with respect to these matters, and to request persistent offenders to leave the theater.

By taking the action outlined above, you will be not only protecting the public from infection but also reassuring the

public as to the safety with which it can patronize your theater. If the Health Department can assist you in this matter, it stands ready to do so.

THE TRANSMISSION OF INFLUENZA BY HANDS AND EATING UTENSILS.

Typhoid fever was once looked upon as an air borne disease. We know now that the danger of air borne infection of typhoid fever can be ignored. Pestilential emanation from the ground has disappeared as a pathological theory. We know now that dirty fingers and not dirty backyards are accountable for the spread of diphtheria. Even pulmonary tuberculosis is coming to be regarded as the result of indirect infection through contaminated food or drink, rather than to the inspiration of the tubercle bacillus. In diseases like common colds, influenza and pneumonia in which the initial infection apparently begins in the respiratory tract, it is only natural that we should assume that the infective agent is contained in the inspired air, especially as such manner of infection may be shown experimentally to be possible. But Colonel Lynch and Lieut.-Colonel Cumming of the Medical Corps of the Army, have made an interesting observation* with respect to the possibility of the transmission of influenza by contaminated fingers and eating utensils, rather than by the inhalation of droplets of infected mucus, that seems to merit serious consideration.

Two distinct methods of messing soldiers are in vogue. In one the men eat from table ware or mess kit equipment which is washed in boiling water; in the other each soldier washes his own mess equipment with his own hands, using for the purpose water at about 40 degrees to 50 degrees centigrade, in common with perhaps 250 other men. This takes place three times every day. The investigations covered 66,000 soldiers at eleven camps or stations, in some of which both methods of messing were employed in different organizations at the same time; 33,452 troops using table ware or mess kits which were boiled developed 1,710 cases of influenza, while 32,624 soldiers who washed their own mess gear developed 8,208 cases of influenza. At Camp Lee, out of 9,859 men using table ware or mess kits which were boiled, there were 540 cases of influenza, while at the same camp among 16,364 men who washed their own mess gear there were 5,019 cases of influenza.

*Paper read at the annual meeting of the American Public Health Association at Chicago, December, 1918.

The investigators point out that each man adds to the common dishwater the bacteria both from his eating utensils and hands, and that each individual finishes his dishwashing with his hands contaminated with all the various bacteria which the common dishwater may contain.

Experiments were conducted to determine the number and characters of bacteria to be found in the dishwater and on the hands of the men. Two especially interesting observations were made in this connection. It was found that the dishwater was not so rapidly contaminated when the hands were used as a mop for actually cleaning the eating utensils as when not so used, the inference being that in the former procedure the bacteria were more inclined to stick to the hands with the grease rubbed off the mess gear, thus suggesting the greater possibility of contaminating objects of all sorts which might subsequently be handled. It was also observed that water in which men washed their hands showed a tremendous increase in bacterial count in cold weather as compared with warm weather, a fact which is explained by the increase of mucus secretions from the nose and mouth in cold weather and a consequent increased distribution of any bacteria to be derived from these sources. It is suggested in this connection that while holding the hand before the mouth when coughing may protect others from direct infection, the procedure inevitably contaminates the hand and in this way leads to the contamination of objects which may be handled and to the indirect infection of other persons.

As a result of the investigations in these camps it was concluded that 80 per cent of the influenza was due to "insanitary messing arrangements," and that the constant recovery of streptococci from the hands of streptococcus carriers pointed to hands as an important factor in the rapid spread of streptococcus carriers to be observed in camps and in bringing about the prevalence of the form of pneumonia with which such organisms are associated.

The same investigators carried the investigations outside the military camps. An examination of specimens of dishwater from ten different restaurants showed the average bacterial count to be 4,000,000 per cubic centimeters. Twelve million organisms were isolated from the ladle of a spoon used by a streptococcus carrier. "Streptococci survive for some time in water and are resistant to desiccation for at least several days on a dried surface." It is pointed out that "the number of organisms per cubic centimeter in restaurant dishwater is far

greater than in many specimens of sewage," and that "a spoon may be contaminated with a culture of known organisms, then dried and washed with eating utensils in the usual manner and finally identified by the original contamination which has adhered to it during the washing process." The importance of cleanliness of the hands and the subjection of eating utensils to boiling water both in restaurants and the home is emphasized by these investigators in the following words: "In the prevention of sputum-borne epidemics, the hygiene of the hand and the hygiene of eating utensils is of paramount importance; clean hands, disinfected eating utensils, the avoidance of intermediate object conveyors handled by many persons, the frequent cleansing of such conveyors, the keeping of the hands away from the mouth and nose, the elimination of the sick from the kitchen" are essential, "but above all is the necessity for popularizing our knowledge that it is the sputum-soiled hand and the contaminated eating utensil which play the chief role in mouth-to-mouth infections."

INAUGURATION OF A TENEMENT HOUSE SERVICE.

With a view to the more efficient and economical execution and enforcement of the *housing laws* of the city, in so far as they relate to sanitation and are enforceable by the Health Commissioner, a group of the sanitary inspectors in the service of the Health Department has been detailed by the Health Commissioner for the sole purpose of executing and enforcing such laws. The group of inspectors thus detailed constitute what is to be known as *the housing service* of the Health Department. For the present the group will be responsible through Deputy Commissioner Thomas Jordan directly to the Health Commissioner.

Formerly the entire City of Boston was divided into twenty-nine districts, and to each district a sanitary inspector was assigned. Each such inspector was responsible for the execution and enforcement within his district of all statutes, ordinances, regulations and orders pertaining to sanitation, the execution and enforcement of the housing laws being merely an incident in the day's work. Under the present plan the number of sanitary districts has been diminished and the areas of certain of them enlarged, but inasmuch as the inspector in charge of each district has been relieved of the duty of looking after housing conditions within his district he should be able

to discharge as efficiently as heretofore all such duties as remain. And by assigning a definite group specifically to look after housing conditions, official responsibility for such conditions, in so far as the Health Department is concerned, can be more accurately fixed.

The housing service has to do particularly with the location, plan, structural condition and number of occupants of buildings, in so far as the health of the occupants of such buildings and of buildings in the vicinity are affected thereby. Existing statutes, ordinances, regulations and orders pertaining to housing conditions from a sanitary standpoint has been compiled at once for the guidance of the service, a program of work has been laid down, and an effort is being made to correct as rapidly as possible such objectionable housing conditions as may be remediable under existing law. The operations of the service to the end named will tend to define the needs of the city with respect to new legislation, if there be any such needs, and will record the facts upon which such legislation may be framed and upon which its enactment can be urged.

An Order Creating a Housing Service Within the Health Department and Defining the Organization and Duties of That Service.

Ordered:

1. There is hereby established in the Health Department a housing service.

2. The housing service shall execute and enforce all statutes, ordinances, regulations and orders enforceable by the Health Commissioner and pertaining to the location, plan, structural condition and number of occupants of buildings, in so far as the sanitary conditions of such buildings and of buildings in the vicinity, and the health of the occupants thereof, are liable to be affected thereby.

3. The work of the housing service shall be done by such inspectors and clerks as may be detailed by the Health Commissioner for that purpose, of whom one will be designated as supervisor.

4. The supervisor of the housing service is responsible directly to the Health Commissioner.

5. The duties of the supervisor are as follows:

(a.) To make a program of the work to be done by the housing service, and when such program has been approved by the Health Commissioner, to carry it into effect.

(b.) To compile at once all existing statutes, ordinances, regulations and orders specifically governing the work of the housing service as defined in paragraph 2, and to provide a copy for each inspector and each clerk employed in the service.

(c.) To prepare at once such blank forms and such records as the due despatch and proper record of the work of the service may require.

(d.) To assign to each inspector and to each clerk in the housing service the work that is to be done by him, to keep the time record of all inspectors and clerks in the housing service, and to be responsible for their efficiency and conduct.

(e.) To prepare, or cause to be prepared under his direction, for the Health Commissioner's signature, all notices, orders and letters required to be issued in connection with the work of the service.

(f.) To make written recommendations for the improvement of the work of the service, including recommendations for the enactment and promulgation of necessary legislation, from time to time as circumstances require.

6. *If any inspector in the housing service observes or obtains knowledge of any condition or circumstance apparently requiring action by the Health Commissioner, which condition or circumstance is not within the purview of the housing service, he shall promptly refer it through the supervisor, to the proper branch of the Health Department for action; but in any such case, in so far as the condition or circumstance comes under the personal observation of the inspector, he shall, at the time of reporting the case for reference, make a proper report and recommendation concerning the case, so as to permit initial action by the Health Department without a preliminary visit by the inspector to whom the case is to be referred.*

7. *If any inspector in the service of the Health Department but not assigned to duty in the housing service observes or obtains knowledge of any condition or circumstance requiring action by the Health Commissioner, which condition or circumstance is apparently within the purview of the housing service, he will immediately refer the case in writing, through the deputy commissioner under whom he is serving, to the housing service for action; but in any such case the inspector by whom the reference is made will merely state the facts of the case, without recommendation.*

WM. C. WOODWARD, M. D.,
Health Commissioner.

November 14, 1918.

REPORT OF THE HEALTH UNIT FOR THE MONTHS OF OCTOBER, NOVEMBER, DECEMBER, 1918.

Health Department.

Visits made by medical inspector:

Contagious	205
Tuberculosis	0
Ophthalmia	26
Miscellaneous	53
Total	<u>284</u>

Cases visited by nurses:

Medical	384
Babies	702
Total	<u>1,086</u>

Defective sanitary conditions found in tenement houses,	12
Calls by district physician from Boston Dispensary	598

Instructive District Nursing Association.

Visits made by nurses	2,418
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Baby Hygiene Association.

Total number of babies cared for	652
New babies admitted	52
Babies readmitted	2
Conferences held	10
Total conference attendance	560
Home visits by nurses	1,044

Associated and Hebrew Federated Charities.

Cases investigated and assisted	7
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Consumptives' Hospital Department.

Calls by nurses in district	1,852
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SUMMARY OF VITAL STATISTICS.

There were 6,057 deaths reported in the months of October, November and December, against 2,983 in the corresponding period last year, a death rate of 30.63 against 15.32.

Reported deaths of nonresidents numbered 766, against 431 last year.

The principal decreases and the principal increases were:

Increases:

Influenza	2,613
Whooping cough	25
Pneumonia, Broncho	151
Pneumonia, Lobar	211
Diarrhea and enteritis (under 2 years)	27
Accidental and violent	47

Decreases:

Syphilis	9
Heart disease and nephritis	43
Measles	21
Scarlet fever	8

There were 219 more deaths under 1 year, 353 more under 2 years and 534 more under 5 years.

NUMBER OF CASES AND DEATHS FROM COMMUNICABLE DISEASES FOR OCTOBER, NOVEMBER AND DECEMBER, 1918, AS COMPARED WITH CORRESPONDING PERIOD IN 1917.

	CASES.			DEATHS.		
	1918.		1917.	1918.		1917.
	Total.	Non-resident.	Total.	Total.	Non-resident.	Total.
Diphtheria.....	466	82	1,380	50	13	78
Scarlet fever.....	208	14	399	2		10
Measles.....	73	1	777	4	1	25
Typhoid fever.....	16	2	50	4	1	3
Whooping cough.....	150	1	406	37		12
Pulmonary tuberculosis.....	549	42	660	249	19	273

MORTALITY FOR OCTOBER, NOVEMBER AND DECEMBER, 1918, AND CORRESPONDING MONTHS IN 1917.

	1918.	1917.
Total deaths	6,057	2,983
Nonresidents	766	431
Rate	30.63	15.32
Corrected rate (nonresidents deducted)	22.65	13.11
Deaths under 1 year	651	162
Deaths under 2 years	894	201
Deaths under 5 years	1,161	238
Deaths over 60 years	1,063	354

**CAUSES OF DEATH, OCTOBER, NOVEMBER AND DECEMBER,
1918, AND CORRESPONDING MONTHS IN 1917.**

	Non-		Totals.
	Totals.	residents.	Totals.
	1918.	1918.	1917.
Cerebro-spinal meningitis	16	5	9
Diphtheria	50	13	78
Measles	4	1	25
Scarlet fever	2	—	10
Tuberculosis (pulmonary)	249	19	273
Tuberculosis (other forms)	43	13	27
Typhoid fever	4	1	3
Whooping cough	37	—	12
Accidental and violent	231	48	184
Heart disease and nephritis	563	43	606
Bronchitis	40	2	27
Cancer	241	49	223
Diarrhea and enteritis (under 2 years)	117	40	90
Diarrhea and enteritis (2 years and over)	16	3	19
Erysipelas	5	1	3
Meningitis and encephalitis	14	1	16
Old age	16	—	8
Pneumonia, Broncho	259	15	108
Pneumonia, Lobar	458	44	247
Premature birth	145	28	91
Puerperal diseases	36	6	34
Rheumatism	3	—	8
Syphilis	18	2	27
Influenza	2,622	284	9
Other causes	868	148	846

**The Following is a Summary of the Work Done by the
Different Divisions in the Department for October,
November, December, 1918.**

CENTRAL DIVISION.

Regulations promulgated	4
Hearings held	5
Stable license approved (provisional)	1
Premises ordered vacated	4
Miscellaneous orders	5
Applications for lying-in hospitals approved	5
Application for lying-in hospital refused	1
Forcible removal of patients	8
Culture station discontinued	1
Culture station approved	1
Appointments	2
Appointments (temporary)	4
Dump applications approved	7
Undertakers appointed	2

Permit to reoccupy premises	1
Prosecutions ordered	154
Leaves of absence granted	7
Leaves of absence refused	2
Removal of buildings authorized	16
Permit to remove milk revoked	1
Permit to remove milk granted	1
Hen permits revoked	2
Appointments (provisional)	3
Resignations	4
Employees transferred	3
Deaths	2
Promotions (permanent)	13
Promotions (temporary)	2

Licenses — Permits Granted.

Milk licenses	102
Vehicles inspected and approved	1,664
Manicure — Massage	26
Numbers assigned	81
Licenses to peddle fruit and vegetables	101
Hen permits	235
Licenses renewed to remove grease, bones, etc.	0
Dump permits	9

MEDICAL DIVISION.

Communicable Diseases.

Number of visits by medical inspectors	2,448
Antitoxin given	17
Deaths investigated	153
Cases brought to Boston for treatment	197
Vaccinations	71
Vaccination certificates	44
Antityphoid vaccine administered	0

Public Health Nursing.

Communicable disease visits	3,107
Number of revisits (infants)	14,622
Number of new babies visited	2,279
Influenza visits	1,773
Total visits by nurses	<u>21,781</u>

BACTERIOLOGICAL LABORATORY.

Examinations for Diagnosis and Release.

Diphtheria	1,996
Tuberculosis	841
Typhoid	122
Gonorrhea	1,980
Gonorrheal ophthalmia	94

Syphilis	2,015
T. B. Comp. Fix. Test (special examinations)	773
Other examinations *	33
Bacteriological milk examinations	1,899

FOOD INSPECTION.

Live Stock Inspected at Brighton Abattoir.

Cattle inspected	3,082
Calves inspected	3,435
Swine inspected	13,056
Sheep inspected	31
Parts condemned	1,226
Swine condemned	68
Stores inspected	5,807
Court cases	36
Cases placed on file	7
Case placed on probation	1
Case dismissed	1
Fines	\$2,150
New reports	145
Defects remedied	33
Referred to sanitary division	29
Milk applications approved	142
Complaints	78

DAIRY INSPECTION.

Total number of sanitary inspections	1,643
Total number of cattle inspections	8,452
Sanitary inspection of dairies	471
Sanitary inspection of milk depots and licensed dealers	1,173
Dairy scoring above 50 points †	346
Dairy scoring below 50 points	125
Dairies with milk rooms	296
Dairies without milk rooms	172

MILK INSPECTION.

(Examinations as to Statute Requirements.)

Samples examined:	
Chemical examinations of milk	4,289
Bacteriological examinations of milk	1,907
Chemical examinations of vinegar	78
Chemical examinations of butter and cheese	29
Miscellaneous examinations	25
Number of court cases	79
Fines	\$1,585

* Malaria, 12; paratyphoid, 2; sputa for influenza, 3; chicken livers for T. B., 1; genito-urinary T. B., 7; leprosy, 1; Vincent's angina, gauze for sterility pleuritic fluid for organisms, 3.

† Passable mark.

Inspection of Provisions — Articles Condemned.

Meat:		Miscellaneous:	
Liver	40 pounds	Onions	192 pounds
Rabbit	311 pounds	Piccalilli	146 pounds
Goose	12 pounds	Pickles	40 gallons
Tripe	70 pounds	Nuts	3 bushels
Poultry	12,039 pounds	Ale	14 bottles
Ham	26 pounds	Miscellaneous	5 pounds
Veal	1,042 pounds	Prunes	25 pounds
Hamburg	2 pounds	Grapes	521,610 pounds
Beef	125½ pounds	Oranges	304 dozen
Lamb	33 pounds	Peaches	134 bushels
Sausage meat	306 pounds	Peaches, dried	15 pounds
Frankforts	27 pounds	Candy	5 pounds
Deer	157 pounds	Walnuts	92 pounds
Pork	374 pounds	Potatoes	1 bushel
Corned beef	169 pounds	String beans	1 bushel
Corned shoulder	6 pounds	Eggs	945 dozen
Minced meat	2 pounds	Liquid eggs	109 pounds
Fish:			
Fish	790 pounds		

SANITARY INSPECTION.

New reports	17,462
Legal notices recommended	2,047
Reinspections	13,472
Nuisances reported	13,976
Complaints investigated	2,264

MORBIDITY AND MORTALITY.

(12 Months.)

	1918.	1917.
Total deaths	17,445	12,728
Nonresident deaths	2,424	1,863
Deaths under 1 year of age	2,298	1,965
Pneumonia	2,375	1,605
Cancer	954	917
Heart disease and nephritis	2,262	2,392
Diarrhea and enteritis under 2 years	426	407

DEATHS FROM COMMUNICABLE DISEASES.

(12 Months.)

	1918.	1917.	1918. Non- residents.
Diphtheria	217	278	67
Scarlet fever	24	46	8
Measles	112	102	13
Typhoid fever	20	22	6
Whooping cough	182	44	11
Tuberculosis (all forms)	1,367	1,312	148

CASES OF COMMUNICABLE DISEASES REPORTED.

(12 Months.)

	1918.	1917.	1918. Non- residents.
Diphtheria	2,832	4,098	567
Scarlet fever	1,126	1,497	196
Measles	6,319	5,695	82
Typhoid fever	110	201	17
Whooping cough	2,009	931	25
Tuberculosis (all forms)	3,049	3,089	309

MONTHLY METEOROLOGICAL SUMMARY, OCTOBER.

ATMOSPHERIC PRESSURE.

(Reduced to sea level; inches and hundredths.)

Mean, 30.12; highest, 30.56; date, 19; lowest, 29.56; date, 6.

TEMPERATURE.

Highest, 79; date, 29; lowest, 38; date, 19; greatest daily range, 26; date, 6; least daily range, 11; date, 16; normal for month, 52.3°.

PRECIPITATION.

Total this month, 0.99; snowfall, 0; greatest precipitation in 24 hours, 0.38; date, 31; snow on ground at end of month, 0; normal for this month, 3.86.

WIND.

Prevailing direction, southwest; total movement, 6,610 miles; average hourly velocity, 8.9; maximum velocity (for five minutes), 30 miles per hour from northwest, on 18th.

WEATHER.

Number of days clear, 8; partly cloudy, 12; cloudy, 11; on which .01 inch or more of precipitation occurred, 7.

MISCELLANEOUS PHENOMENA (Dates of).

Auroras, 8.9; halos: solar, 9, 20, 24, 25, 29, 30; lunar, 0; hail, 1; sleet, 0; fog, 0; thunderstorms, 3, 6; frost: light, 8; heavy, 9, 19, 20, 23, 24; killing, 0.

MONTHLY METEOROLOGICAL SUMMARY, NOVEMBER.

ATMOSPHERIC PRESSURE.

(Reduced to sea level; inches and hundredths.)

Mean, 30.00; highest, 30.59; date, 6; lowest, 29.11; date, 18.

TEMPERATURE.

Highest, 65; date, 18; lowest, 19; date, 26; greatest daily range, 22; date, 15; least daily range, 4; date, 21; normal for month, 41.2°.

PRECIPITATION.

Total this month, 1.20; snowfall, T.; greatest precipitation in 24 hours, 0.67; date, 17-18; snow on ground at end of month, 0; normal for this month, 4.10.

WIND.

Prevailing direction, west; total movement, 7,125 miles; average hourly velocity, 9.9; maximum velocity (for five minutes), 29 miles per hour from northwest, on 18th.

WEATHER.

Number of days clear, 7; partly cloudy, 11; cloudy, 12; on which .01 inch or more of precipitation occurred, 9.

MISCELLANEOUS PHENOMENA (Dates of).

Auroras, 0; halos: solar, 15, 25, 28; lunar, 12, 15; hail, 0; sleet, 0; fog, 17; thunderstorms, 0; frost: light, 2; heavy, 3, 4; killing, 12.

MONTHLY METEOROLOGICAL SUMMARY, DECEMBER.

ATMOSPHERIC PRESSURE.

(Reduced to sea level; inches and hundredths.)

Mean, 30.11; highest, 30.75; date, 19; lowest, 29.49; date, 4.

TEMPERATURE.

Highest, 63; date, 15; lowest, 13; date, 7; greatest daily range, 24; date, 20; least daily range, 5; date, 28; normal for month, 31.6°.

PRECIPITATION.

Total this month, 3.21; snowfall, 8.4; greatest precipitation in 24 hours, 1.02; date, 11, 12; snow on ground at end of month, 0.1; normal for this month, 3.41.

WIND.

Prevailing direction, northwest; total movement, 6,992 miles; average hourly velocity, 9.4; maximum velocity (for five minutes), 39 miles per hour from northwest, on 15th.

WEATHER.

Number of days clear, 8; partly cloudy, 5; cloudy, 18; on which .01 inch or more of precipitation occurred, 15.

MISCELLANEOUS PHENOMENA (Dates of).

Auroras, 0; halos: solar, 16; lunar, 15, 16, 20; hail, 0; sleet, 11; fog, 14; thunderstorms, 0; frost: light, 0; heavy, 0; killing, 0.

"T" indicates trace of precipitation.

SEP 22 1919

